

CHESS MASTER

... at any age



Rolf Wetzell



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by
Rolf Wetzell

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Chess Master . . . at any age

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Contents

Acknowledgement	viii
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PART I:

Why Another Book?	1
A. Chess for fun or chess for real?	1
B. Origins.	
1. The years of confusion	1
2. The years of structuring	2
C. What's in this book?	3
D. This book: How correct?	4
E. How to use this book	4

PART II:

Components of Chess Capability, and more	7
CHAPTER 1: Components of Chess Capability	9
A. Images	10
B. Ability to PROject Positions (APROP)	13
The Analysis Horizon	18
C. The Move selection Method (MM).	20
1. MM: a specific move selection by a master.	21
2. MM: a general description	23
a. The ideal (or model) method of the MM	23
b. The structure of the real MM	25
3. Blunders	29
4. Should-A-Beens	31
D. Attitude.	32
1. Desire	33
2. Objectivity	34
3. Time Management	34

a. Introduction	34
b. Time Pressure	37
(i) Time Pressure in fixed-move time controls	38
(ii) Time Pressure in Action Chess	39
(iii) Time Pressure in Blitz Chess	44
c. Relative Time Pressure	44
d. Allocating extra time in critical positions	45
4. Discipline.	47
5. On-line toughness	47
6. Physical fitness	48
7. Personality influences	49
a. The most economical capture	50
b. The specific-piece obsession	51
c. The Wetzell Queen Paralysis	52
d. Playing to impress the spectators	53
e. Playing to a predetermined result	55
E. Genetic factors	55
1. Mental Clock Rate	55
2. Memory	58
F. The composite evaluation of Strength	59
CHAPTER 2: Chess Inputs and Their Filtering	61
A. Chess inputs	61
1. Playing chess	61
2. Studying	62
3. Other inputs.	63
B. Filtering chess inputs	63
1. Attitude factors	63
2. Genetic factors	64
CHAPTER 3: A Model of Chess Strength	65
A. Basic structure	65
1. The liquid for the vase	65
2. Features of the vase	67
B. The rust factor	68
C. The effect of additional games	69

D. Effect of a tournament	70
E. Effect of Additional Studying	72
PART III:	
Improving Your Chess Strength	76
CHAPTER 4: Increasing the Number of Images	79
A. Getting new ideas	81
1. Studying your own games	81
Why study your own games?	84
2. Studying other material	88
3. Making the commitment to quality study time	89
The structure of “quality study time”	90
B. Capturing new ideas	91
1. Flash Cards	92
a. Flash Card generation	92
(i) Introduction and overview	92
(ii) The layout of a Flash Card	93
(iii) Development of a typical Flash Card	96
(iv) Additional Flash Cards	97
b. Filing Flash Cards	114
c. Flash Card drill	116
d. Stalking the grand themes	118
(i) The underutilized Queen	126
(ii) The overvalued Bishop	127
e. Flash Cards must be correct!	129
2. Openings and opening sheets	129
a. The right way to study openings	129
b. Visual aids for learning openings	131
CHAPTER 5: Improving APROP	135
A. Studying combinations	135
B. Visualizing the first moves in a game	136
C. The stickiness of the starting position	137
D. Analysis starting from a “platform”	140
E. Optimizing the Analysis Horizon	141

CHAPTER 6: Improving the Move selection Method	145
A. Improving the Move selection Method (general)	146
B. Specific limitations of the Move selection Method	147
1. Analysis Fibrillation	147
2. Analysis Repetition	149
3. Blunders	149
4. General thoughts	150
CHAPTER 7: Moderating Attitude	153
A. Can desire and discipline be improved?.....	155
1. Study time	156
2. Study methods	157
3. Study materials	157
4. Your attitude	157
B. Improving objectivity	158
C. Improving Time Management	161
1. Purging Time Pressure	162
a. The bane of Time Pressure	162
(i) You must believe that Time Pressure worsens results	163
(ii) The false premise of “Relative Time Pressure”	169
(iii) The causes of Time Pressure	170
b. The remedial program	175
(i) The mechanics of Time Pressure tracking	175
(ii) Reward and punishment	187
2. Improving allocation of extra time in critical positions.....	192
D. Improving “on-line toughness”	194
E. Improving physical fitness	198
1. Short-term physical fitness	199
a. The obvious dimension of “today’s game” physical fitness	199
b. The subtle dimension of “today’s game” physical fitness	200
2. Long-term physical fitness	202
a. Stay drug free	203
b. Use alcohol modestly or not at all	203
c. Be a NON-smoker	204
d. Stay physically lean	204
e. Exercise moderately	205
f. Learn about stress	205

g. Learn and practice good nutrition	206
F. Personality influences	207
1. Reckless vs. overcautious play	207
2. Other faulty special preferences	210
CHAPTER 8: The Long-Range Plan	213
A. Why a long-range plan?	213
B. Long-range plan details	214
1. Images	216
a. Openings	216
b. Middlegame	216
c. Endings	217
2. APROP	217
a. General	217
b. Combinations	218
c. Platform analysis	219
3. Personality	220
a. Objectivity	220
b. Caution-recklessness	220
c. Toughness	221
d. Fitness	222
4. Move Selection Method	223
5. Genetic Factors	223
Afterword	224
APPENDIX I: Ideas for Scientific Study	225
A. Can Mental Clock Rate be improved?	225
1. Thesis and Objective	225
2. Method of the experiment or test	225
a. The reference portion of the experiment	226
b. The learning portion of the experiment	226
B. The value of subliminal audiocassettes	227
C. Time Pressure influence on chess Strength	229
D. Chess Strength vs. study time	231
APPENDIX II: Computer-generated Move-Search Algorithm	232

APPENDIX III: Scenarios Leading to Flash Cards	239
A. Rote is NG	239
B. Frog into a prince	241
C. Central Knight — safe squares?	241
D. Redeploy!	242
E. Predefend	243
F. There are other ideas besides recapturing	245
G. Don't prepare useless sorties	247
H. The Block	247
I. Permute!	248
J. The binary-results move	249
K. The attack beyond the galaxy!	252
L. Home not always safe!	253
M. Review relinquished protection!	253
N. Transfer of forces	255
O. Why is pawn capture automatic?	257
P. Look for the active defense!	259
APPENDIX IV: Backup Calculations for the Model	261
A. Evaporation rate of light and heavy liquid	261
B. Calculation for liquid added weekly	261
C. Rating track for a 1600 player who quits playing	262
D. Rating calculations for increasing play	263
APPENDIX V: Illustrated Games	265
1. Wetzell–Barbara Peskin	268
2. Wetzell–Frank Deming	269
3. John Loyte–Wetzell	270
4. Wetzell–Rigel Capallo	272

5.	Allan Bennett–Wetzell	273
6.	Wetzell–Allan Bennett	275
7.	Brad Ryan–Wetzell	277
8.	Wetzell–Larry Carpentier	278
9.	Frank Deming–Wetzell	280
10.	Wetzell–Roger Capallo	281
11.	George Mirijanian–Wetzell	283
12.	Nasser Abbasi–Wetzell	286
13.	Wetzell–Allan Bennett	288
14.	Wetzell–George Mirijanian	289
15.	Wetzell–William Aulson	291
16.	Wetzell–Rigel Capallo	293
APPENDIX VI: From the Editor’s File		296
APPENDIX VII: Glossary		299
The Author		301
Colophon		301

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PART ONE

WHY ANOTHER BOOK?

A. Chess for fun or chess for real?

Are you the kind of person who enjoys an occasional game of chess, maybe with a friend or someone you love, in front of a roaring fire in the evening after a hard day of skiing or hiking? When you'd love to win, but it really isn't important? If so, you have a great attitude which I admire and wish I had too.

I divide all people in the world into two groups — those who keep score and those who don't. If you fit the description above, you're not a scorekeeper, and this book is not for you.

But the fact that you're reading this now is a sign that you *are* a scorekeeper, that you care about the results of the games you play, that you want to become better. You're curious: is this book really saying anything new? Will it teach me new ways to study, or improve the efficiency of the studying that I do now?

B. Origins.

1. The years of confusion.

I've played chess for over half a century, on and off, since I was six. In the early 1960s, I started playing somewhat regularly, and played in tournaments occasionally.

During the decade that followed, I improved somewhat, doing the kinds of things other people do:

I'd lose a game in the opening, then later look it up in MCO (*Modern Chess Openings*), learn (or really just memorize) the correct continuation as well as a few related lines, so I would know those lines stone cold, and hope some unsuspecting soul would play this continuation against me again. A year later, when someone played that line again, I got crunched all over again because I'd forgotten all that MCO stuff in the meantime.

I studied combinations. Material like Reinfeld's *1001 Winning Chess Sacrifices and Combinations*, which, by the way, I still do. I constructed elaborate scoring techniques from an A to an F, including factors such as the length of time I used. I always used a stopwatch, and the number of half-moves — the number of “ply” in the correct solution — was a factor in the grade I received.

But my scoring seemed to improve only imperceptibly, even after a year or two. I concluded that I was not applying myself in the most effective manner — my studying was very sub-optimal, as far as improving my chess strength.

By the end of the 1970s I started to assess my desires and approaches and results.

2. The years of structuring.

I wanted to become a master sometime during my life. I had been a “strong B/weak A” player — with a rating at the crossover from “B” to “A” for many years. I started to realize that my techniques of playing rated games and study methods were making relatively little headway.

What makes up chess strength? (When the term *Strength* is used in this book, it denotes “chess strength.”) I felt that I had to have a better idea of the components making up *Strength* — we'll call

them CCC (Components of Chess Capability). I couldn't really find a coherent theory of CCC in any book.

Once I understood CCC, I reasoned, I could devise a plan, or method, to improve. I feel I have accomplished this goal to a reasonable degree in the dozen years spanning the late 1970s and 1980s.

C. What's in this book?

We'll answer these questions:

1: What makes up chess strength — what are its components, its ingredients?

2: How does chess strength typically change?

3: What are the most effective, most efficient means to improve chess strength?

Appendix I has suggestions for specific scientific studies that, when conducted, should confirm some of the ideas in this book. They would be useful for organizations like the National Science Foundation in their pursuit of the understanding of the learning process.

Appendix II is an algorithm for a computer-generated move selection, which, in principle, belongs to Part II, but is lengthy, maybe tedious, and therefore offered as an appendix.

Appendix III is a compilation of Flash Cards, examples of a subject covered in Part III. You will discover, as you go through this book, that Flash Cards are one of my cornerstones to chess improvement.

Appendix IV develops backup calculations for the model of *Strength* developed in Chapter 3.

Appendix V is a collection of my recent games illustrating points from this book.

Appendix VI is a game by the publisher.

Appendix VII is a Glossary.

D. This book: How correct?

In science, a theory is a concept or speculation, generally supported by some mathematical proof or development, but usually preceding the scientific tests validating it. Once a sufficient number of tests are conducted to confirm the theory, it becomes a law. Part II is my theory of CCC, while Part III is my theory on optimizing “how to get better.”

An important factor lending credibility to my theories is my rating track record — relative to what I call “the Soltis curve.” International Grandmaster Andy Soltis wrote an article in *Chess Life*, January 1986, titled “You’re Never Too Old To Mate.” His thesis, simplified, is that a player “reaches his level” eight years (give or take a little) after starting to play serious chess. From there, *very few*, even among the greats, improve more than 100 rating points. A 100-point rating difference between two players means that the stronger would be expected to win 64 percent of the time, or about five games in an eight-game match. Soltis cites examples, and had obviously done research to corroborate his claim.

Using my own study techniques, *I have improved almost two full rating classes, almost 400 points, since my “eight-year mark” in 1972.* I had been playing fairly seriously, and in tournaments, since 1964 (see Figure 1).

E. How to use this book.

There are two ways to use this book.

The first is simply to digest the book in order. This has the clear advantage of giving you a basic understanding of the Components of Chess Capability (CCC) explained in Part II before you move on

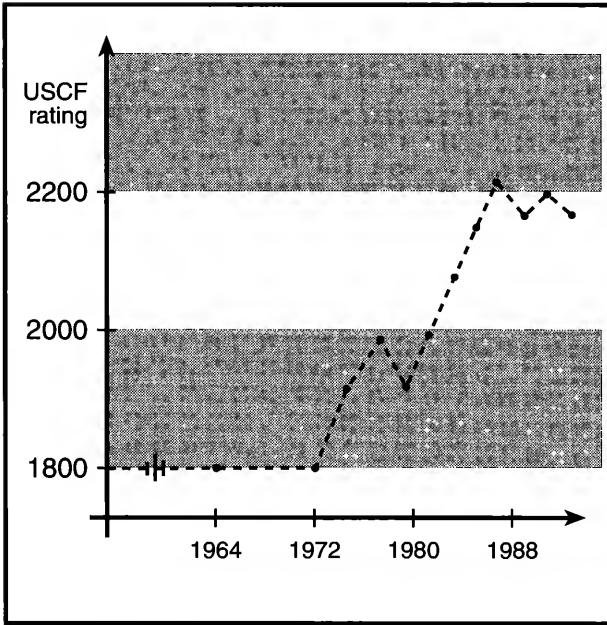


Figure 1

to *improving* in Part III, thereby making it easier for you to take full advantage of the ideas there.

The other way gets you to the bottom line, namely, how to improve, more quickly: you simply assume this book is accurate in its structure of CCC. You accept the material in Part II for the time being. You go directly to Part III, and apply the ideas on “how to improve.”

Before going directly to Part III, consider this: people who really believe in their cause do much better than those who are lukewarm or operating by rote. Whether it’s in religion, politics, sales, or scholastics — **the believer does better.**

And so it goes in chess. Not every idea presented is a self-evident truth. You have to examine each in your mind, and come to a strong conclusion about it. If you agree with it, then employ it forcefully and

steadfastly. If you don't agree with it, don't use it.

If you don't agree with a suggestion, but say you'll do it anyway, you'll subconsciously do it badly. The technique will not work, and you'll eventually become disappointed.

Using this alternate method — starting with Part III — you may eventually want to go back and digest Part II.

PART TWO

COMPONENTS OF CHESS CAPABILITY, AND MORE

What are the factors that make one person a stronger chessplayer than another? We're going to itemize and dissect these CCC, these Components of Chess Capability.

In Part I, we said that we must understand the CCC before we can intelligently try to improve our *Strength*.

You might well now be thinking: "What's the big deal? Everyone knows that the better player knows more opening theory, has a better understanding of strategy and the endings, knows more combinations, calculates more accurately and therefore further ahead, and so on." So, you may ask, why not get on with it? Why rehash the obvious?

The difficulty is that just knowing what's in the last paragraph will not guide you to the best use of your time in improving your game. In fact, most people, after playing a few years, stop improving, even though they know these obvious things. This is my interpretation of Grandmaster Andy Soltis' discovery.

So we'll go through the CCC in detail, as a foundation to an improvement program.

Part II deals with CCC as a vehicle to understanding *Strength*. It also deals with the factors that change it, or develop it. We'll call these factors the *inputs* to *Strength*. Our *Strength* is exposed to new *inputs*, which could have positive or negative effects. The *input* of an increased level of study and play

would have a positive effect, while a negative effect could result from an *input* such as inactivity.

Our *inputs* will have greater, or more meager, effects on *Strength*, depending on another set of factors—the *Filter*. Here, the player’s memory comes to mind. A person with an excellent memory will reap more benefit from most forms of study than one who has great difficulty remembering a phone number.

Figure 2 is the rationale in block form.

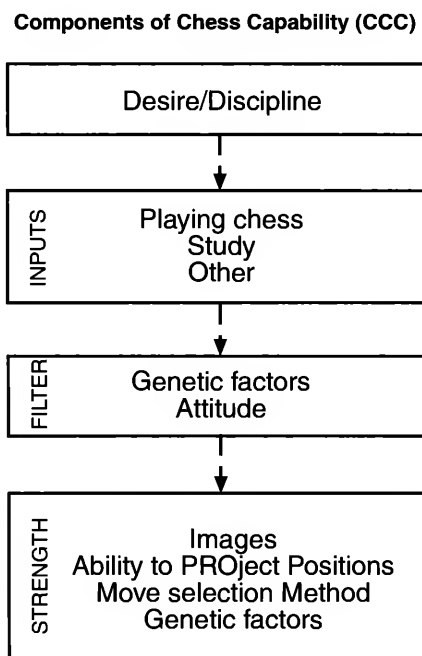


Figure 2

CHAPTER ONE

COMPONENTS OF CHESS CAPABILITY

There are five major components of chess capability. Some of these, in turn, incorporate a group of subsidiary features. We'll identify them here, and then describe them in detail.

First are **Images**, or rapidly accessible concepts, or rapidly accessible facts.

Next is **APROP**, or the "Ability to PROject Positions," ultimately a measure of speed and accuracy of calculation.

Third is **MM**, the **Move selection Method**, or the blueprint or procedure you use to arrive at a move selection given the *Images* that you have at your disposal. You could think in terms of the "goodness" or pertinence of your **Move selection Method** — the tendency to certain types of blunders is a part, a subset, of **MM**.

The fourth component is **Attitude**. An example that comes to mind is objectivity, and, in turn, one manifestation of it is the objectivity a player displays about his winning chances in any given position. *Attitude* is made up of five specific ingredients, and represents, in total, the degree to which *Strength* is modified by this composite.

The fifth component is genetic. It, in turn, has two ingredients. One is **Mental Clock Rate**, the speed with which we can calculate, and the other is memory, or the ease with which we can remember something.

We'll take up each component in detail, but I

would first like to leave you with this thought:

Strength is determined more by the weakest of its five major components than by their average.

A. Images.

Images are the sum total of all of the things you currently know, that you could recall, literally, by snapping your fingers.

Your name, the fact that the sun rises in the East, and that $2 \times 4 = 8$ are all *Images*. Note, however, that *Images* are *rapidly* recallable, or recallable by snapping your fingers. So a friend's name from the distant past that you might recall by concentrating hard for half a minute, but can't recall "on demand," is not an *Image*.

Images, then, represents your storehouse of immediately usable knowledge.

In chess, the following are examples of *Images*.

- a) Three pawns typically are worth a minor piece.
- b) A one-pawn advantage in a pure pawn ending is usually decisive.
- c) A "fork" occurs when a piece can attack two enemy pieces at the same time.
- d) Any specific sequence of moves representing the best defense in an opening (for example, knowing that $3... c5$ is the best reply to $1. e4 e6 2. d4 d5 3. e5$).
- e) On an open board, a Bishop pair is stronger than a Bishop plus Knight.
- f) Any simple tactical operation. An example is the "fork trick" in Figure 3. Here White can play $4. Nxe5$ with the idea of recovering the piece after Black's capture $4... Nxe5$ by playing $5. d4!$

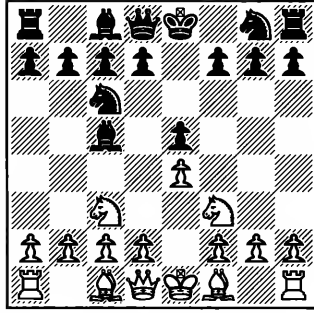


Figure 3–White to move

g) A Knight on a central square on the sixth rank is a big advantage, worth a pawn (a former World Champion aptly called a Knight on the sixth a “nail in the knee”).

h) Knowing the circumstances when a King and pawn-vs.-lone King ending can be won, and knowing the technique.

The above motifs a, b, e, and g represent *strategic Images*; c and f represent *tactical Images*. Examples d and f are *opening Images*, while h is an *endgame Image*.

In Figure 4, let’s say someone has just told you the name of a state capital. You mentally decide whether you want to remember this, and if so, do it, turning this fact into an *Image*. Notice the wavy arrows showing that *Images* eventually evaporate. This is the polite way of saying that we forget. The total number of *Images*, as well as the specific motifs making up these *Images*, changes during our chess career. It is likely to peak during a period of months or years of studying and playing, then subside during periods of lesser activity.

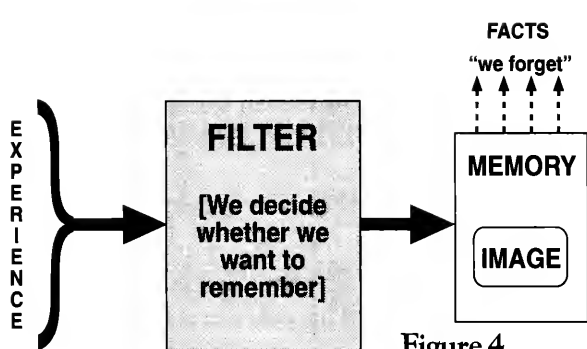


Figure 4

There are three types of *Images*, having different “life-spans.”

A “light” *Image* is a fact, or facts, that are loosely, or almost ran-

domly, acquired, without being well connected with other *Images*. An example might be an opening sequence someone showed you last week, without going over the moves or reasons for them.

A “durable” *Image* is a fact, or perception, repeatedly reinforced, although not necessarily logically connected with other *Images*. A non-chess example might be a friend’s phone number, while an example in chess is White’s well-known fifth move in the Slav: 1. d4 d5 2. c4 c6 3. Nf3 Nf6 4. Nc3 dxc4 5. a4 — see Figure 5. Now, knowing 5. a4 by having repeatedly played this, without knowing the rationale behind the move, is a durable *Image*, because it has been reinforced.

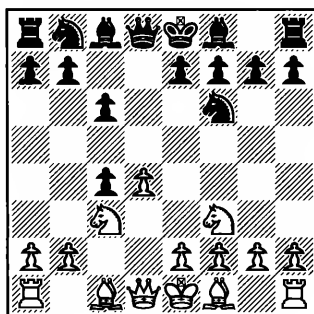


Figure 5—White to move

A “quality” *Image* is a fact or observation logi-

cally connected with another *Image*, so that it is easier to remember.

An example is the move 5. a4 above, and understanding that its purpose is to prevent Black from reinforcing his pawn at c4 by playing ...b5. Another example is the way the Knight moves. It's linked with many opening, middlegame, and endgame *Images*.

In Chapter 4 we'll model the process of learning and forgetting, in order to set the stage for Part III — how to get better, to maximize the number of *Images*.

Images are the basic information we call on and use in our **Move selection Method** to decide on a move. The more *Images*, the greater the player's *Strength*, all other things being equal, of course.

B. Ability to PROject Positions (APROP).

APROP is a measure of the speed and accuracy — but not the soundness of the selection — with which a player calculates and projects a number of moves, or a variation, in advance.

If we were to set up a test to reflect **APROP**, the simplest one would be this: take, as a starting position, a diagram from a chess book showing some middlegame position you have not seen before, and then, without setting up a board, but continuing to look at this position, visualize the game continuation for some number of moves, say eight moves for both sides. Now draw the new position on a chess diagram (you may, instead, set up the position on a chess-board). The total time it took to do this, adding some “penalty time” for each piece incorrectly placed, would be a good measure of **APROP**. Incidentally, in Part III we'll introduce a set of symbols for the pieces which are simple to draw.

This exercise shows that **APROP** is not impacted by the validity of the continuation selected, but only by the *mechanical* accuracy — and speed — of the look-ahead. Carrying this line of reasoning further, we note that certain types of blunders are due to limited **APROP**. An example would be a capture that your opponent has available as a result of an incorrect mental placement of one of the men that has moved, several half-moves into your analysis, after you have just sacrificed a piece.

It's important to explain that **APROP** has nothing to do with the process of selecting a move among different alternatives. That will be covered under the **Move selection Method**.

Without deliberately making fun of the process, **APROP** reflects how quickly and accurately one can go through the mental exercise "If he goes here, then I go Bishop takes Knight. If I go Bishop takes Knight, he goes pawn takes Bishop, and I go Queen takes pawn check and I'm better." And so on. See Figure 6 (*Chess Life*, February 1985).

But we must be careful with this example. We said: "If he goes here, then I go Bishop takes Knight," and so on. But let's say that a better continuation would have been: "If he goes here, I go *Rook* takes Knight," and so on. This inaccuracy, or blunder, has nothing to do with **APROP**.

The Grandmaster's Innermost Thoughts at the Crucial Moment:



"Now, if I go there, bing, he goes there, bong, then I go Bishop, zoom, he goes Knight, bop, I go pawn, bing, he goes Queen, zap, and I go Rook zoom-bang-check!; and it's mate in three!"

Figure 6

Another way of looking at **APROP** is how well one can visualize the positions in blindfold chess. Yet another is one's ability to look ahead in a variation for a few half-moves, fix that position in one's mind, and then project, say, two variations from that position.

APROP, then, is the mechanical aspect of the look-ahead. It includes such features as:

- the degree of accuracy of visualizing the position several ply ahead.
- the degree of accuracy of keeping track of the material balance.
- the lucidity, or the clarity, of the final position.

The last feature is, to some extent, a subset of the first. The reason it's listed separately is that somewhat different skills are involved. For example, in certain endgames a pawn race takes place, where it is not necessary to visualize the entire position at every ply, but only to reach the correct position at the end. The clarity of that position at that point is an *input* to the **Move selection Method**.

To keep things in proper perspective, the accuracy of evaluation of a position is not part of **APROP**.

The better a person's **APROP**, generally, the better he or she can recognize a group of pieces. A couple of groups that might come to mind are shown in Figure 7.

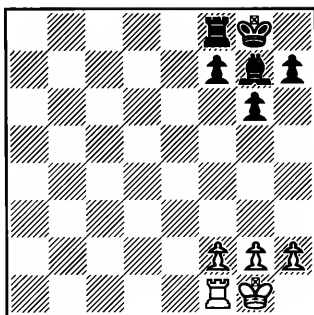


Figure 7

Studies have been conducted wherein a chessboard with pieces and pawns was shown to both strong chessplayers and weak (or non-chess) players for a certain period of time — and each person was then asked to reconstruct the position. As you might expect, the stronger chessplayers could reconstruct the position after a shorter perusal of the given position, and more accurately. However, a very interesting related result of the study showed that if the position were set up randomly, the strong chessplayers did no better than the others.

Visualizing what a new position would look like after a number of half-moves from a chess position in front of you, where you're allowed to keep the original position in front of you as a reference, utilizes a certain mental skill. This is the normal mental engagement a chessplayer pursues during a game, trying to visualize what the board looks like in a look-ahead. This same mental skill is called on when visualizing a new, unfamiliar position that you have looked at for a short time. The first task requires you to replace one (or two, in the event of a capture) chess piece(s) with a new one of the same kind at a new square, for each half-move you're projecting the position. After a number of projected half-moves,

several pieces have moved, or disappeared, from the position you're studying. The second task, visualizing a new and unfamiliar position that you have looked at for a short time, demands that you mentally connect, one after another, each piece on the board to a square or another existing piece. The skills described for the two tasks are really the same.

When confronted with the second task, where the chess position has been set up randomly, a player must relate every piece to a square or another "unrelated" piece. If there are 20 pieces on the board, he'll have to say to himself: "white King at e4, white Queen at a8, white Rooks at b2 and g6," and so on. It's difficult to visualize, or memorize, this sort of information quickly. In the case of a real chess position, it might contain eleven chess pieces as shown in Figure 7, where all one needs to remember for these 11 pieces is: White has a normal Kingside castled position, and Black has a normal Kingside castled position with a fianchettoed Bishop. The logical steps we have just developed, together with the fact that the reconstruction of real chess positions is much more successful than reconstruction of random positions, is a very strong indication that chessplayers will remember positions by a set of ideas — Black has a "French Defense" type of pawn chain (h7, g7, f7, e6, d5, c5, b7, a7) — and so on.

For a given **APROP**, the look-ahead possible in a given number of seconds (the number of half-moves by each side projected) depends on the number of branches, or variations. If the variation is totally forced, then a moderately strong player may look ahead more than half a dozen ply, whereas if, on the first half-move, four reasonable responses are possible, the same player with the same **APROP** will not be able to look as far ahead on every variation.

1. The *Analysis Horizon*.

The *Analysis Horizon* is the “distance” in half-moves (or ply) that one can see ahead in a given period of time with reasonable accuracy. Let’s say you’re playing at a time control of 40 moves per hour. On the average, then, of a minute and a half per move, you might be able to look at three candidate moves, and look four half-moves ahead for each. If there were only two candidate moves, you might be able to see six ply along each one.

If a stone falls on a quiet pond, ever widening circular ripples will develop. The longer the time since the stone hit the pond, the larger will be the biggest circle. On a parallel idea, the longer the reflection time, the greater the *Analysis Horizon*. The distance from the splash point of the stone to the edge of the biggest circle is the *Horizon*, and, to be a realistic *Analysis Horizon*, the distance in half-moves in our chess analogy should be the same in all directions, that is, along all branches of analysis. Some of these branches may be truncated because one of the players is being mated or loses material without compensation, but this is acceptable for that branch of the analysis.

Let’s expand on the previous statement.

The *Analysis Horizon* expands and shrinks with the available time — with the time control. To standardize, we’ll use as a reference for the *Analysis Horizon* the one corresponding to a 40-move-per-hour time control, or, equivalently, a 90-second reflection time.

The *Analysis Horizon* is a reflection of **APROP**.

APROP can be limited by quirks in our thinking patterns. We’ll discuss an example in Part III.

There are really three major factors that affect **APROP**. They are:

a) The degree of development one has attained by playing, and certain types of study.

b) The extent of idiosyncrasies, or hang-ups, that one has, holding a person back from his or her true potential.

c) One's natural capability, based on genetic makeup — memory, etc.

An example of highly developed **APROP**, in my view, occurred in the first Fischer–Larsen game in their candidates match, leading to the Fischer–Spassky World Chess Championship in 1972. Fischer had developed an enviable position — Figure 8,

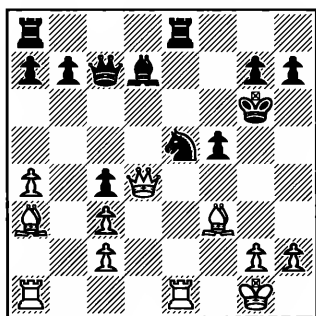


Figure 8—White to move

where, with White to move, Fischer played **23. Rxe5**, allowing a sequence where Black can forage on White's second rank, not to mention threatening mate. So Fischer had to calculate ahead 20 half-moves, or 20 ply, with some branches along the way, including the move he was about to make (his 23rd move). Play proceeded **23... Qxe5** (not **23... Rxe5** **24. Bd6**) **24. Qxd7 Rad8** **25. Qxb7 Qe3†** **26. Kf1 Rd2** **27. Qc6† Re6** **28. Bc5 Rf2†** **29. Kg1 Rxc6** **30. Kxg2 Qd2†** **31. Kh1 Rxc6** **32. Bxc6 Qxc3** **33. Rg1†** when White is clearly winning. The analysis had to reach a

quiet position to be relatively safe. From the diagrammed position, Fischer had to analyze all the way to Black's 32nd move to be sure that he could answer any tactical tricks (double attacks, pins, and so on).

It is important here to mention that my statement about this game does not imply that Fischer has the best **APROP**. World Champions Tal, Karpov, Kasparov, or possibly Botvinnik may have, or have had, better; it's just that this particular game, with its superb level of **APROP**, struck me.

C. The Move selection Method (MM).

The **Move selection Method (MM)** is the *procedure one uses to select a move*. In Section A, we established that one has a certain storehouse of available knowledge, namely, *Images*. In Section B, we established that one has some Ability to PROject Positions (**APROP**) that allows *execution* of a particular sequence of thoughts with some speed and accuracy.

"Execution" is italicized, while "sequence of thoughts" is not, because it is important to realize that **APROP** has nothing to do with the particular sequence of thoughts, but only with the correct mental execution of the sequence chosen.

Let's look at **MM** from two different perspectives, with two different examples. First, we'll give an example of how a master might handle a particular position. Second, we'll describe **MM** in a general way. A computer-generated move selection example is given in Appendix II, should the reader be interested.

1. MM: a specific move selection by a master.

The position in Figure 9 was reached in Allan Bennett–John Loyte, Westford MA, August 1989. Black is in dire straits, but White must still play good chess to bring home the point. In selecting his 36th and 37th moves, we'll describe approximately Allan's **Move selection Method**.

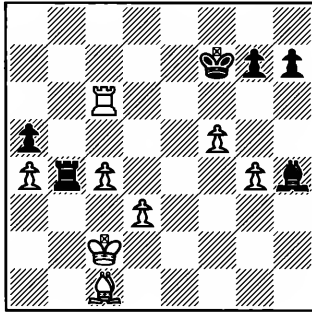


Figure 9–White to move

He considered 36. *Rc7†*. Standard thinking — playing a Rook to the seventh — to drive back Black's King or attack the pawns on the seventh. Here he immediately considered Black's escape with 36... *Kf6*, getting Black's King nearer the center of the board.

Recognizing that this continuation didn't facilitate White's game, Allan looked at this position and then realized that Black, playing this move, would have to lose the Exchange to 37. *Ba3*, since if the Rook moved, White would continue with the skewer 38. *Be7†* winning Black's Bishop. So Black would have to retreat with his King (in response to 36. *Rc7†*), which strategically falls in with White's plans.

In looking further, he realized that Black couldn't play 36... *Kf8*, because the pin 37. *Ba3*

would win the Exchange. Likewise, if Black were to play 36... *Be7*, White would again win the Exchange with 37. *Ba3*, since if Black moves the Rook, White wins the Bishop. Finally, if Black were to play 36... *Ke8*, White could capture the pawn at *g7* when he would be golden, with three passed pawns.

Here Allan stopped, with the conclusion that his intended move 36. *Rc7†* would improve his position, since Black would have to retreat. He played 36. *Rc7†* and Black responded 36... *Kg8*.

For his 37th move, Allen first looked at 37. *Bb2*, logical because it attacks the pawn at *g7*. But 37... *Bf6* 38. *Bxf6* looked unclear because Black will get a passed a-pawn after ...*Rxa4*.

Now Allan saw the potential of a mating net with 37. *g5*, intending to continue 38. *g6*, and after 38... *hxc6*, 39. *fxg6*, threatening 40. *Rc8 mate*. However, all is not crystal clear with 37. *g5* since Black might be able to get away with 37... *g6*, or stop the mate with 39... *Rb8*.

He now noticed the somewhat standard mating position where a protected Rook would mate at *f8*, after having driven Black's King back to *f7*. So the logical continuation would be 37. *Ba3*, Rook moves, 38. *Rc8† Kf7* 39. *Rf8 mate*. To avoid mate, Black could not move the Rook, and the idea would therefore win the Exchange for White.

In his review of the sequence before playing 37. *Ba3*, Allan noticed that Black could retreat his Rook with 37... *Rb8*, defending against the mating sequence and saving himself from further material loss.

But now, triggered by the previous analysis with 37. *Ba3*, he used the standard device of looking at all possible permutations of attacking moves and realized that by playing 37. *Rc8† Kf7* he could win the exchange with 38. *Ba3*, since the Rook cannot move to a safe square and still avoid the mate 39. *Rf8*.

Play did continue 37. Rc8† Kf7 38. Ba3, and White won the Exchange and eventually the game.

Let's summarize the **Move selection Method** used by White in the above sequence.

For White's 36th move:

1. Examine White's strategically logical Rook move to the seventh, with the idea of gaining space by driving Black's King back.

2. Determine whether Black could avoid retreat by either a flight to the center with 36... Kf6 or interposing with 36... Be7.

3. Having established that Black cannot play either of these moves, conclude that 36. Rc7† sufficiently improves White's position and make the move.

For White's 37th move (after 36. Rc7† Kg8):

1. Look for a way of exploiting Black's constricted King position.

2. Having found a method utilizing a mate threat starting with 37. Ba3 (driving the black King to f7 and mating with Rf8), determine if Black has a defense.

3. Having found this defense (37... Rb8), see if there is a method of forestalling it.

4. Fortunately for White, there is. Adjust the plan accordingly (by playing 37. Rc8†).

The **Move selection Method** used here by Allan Bennett is a logical process of examining opportunities.

2. MM: a general description.

- a. The ideal (or model) method of the **Move selection Method**.

Figure 10 is a diagram of the flow of thoughts in the selection of a move.

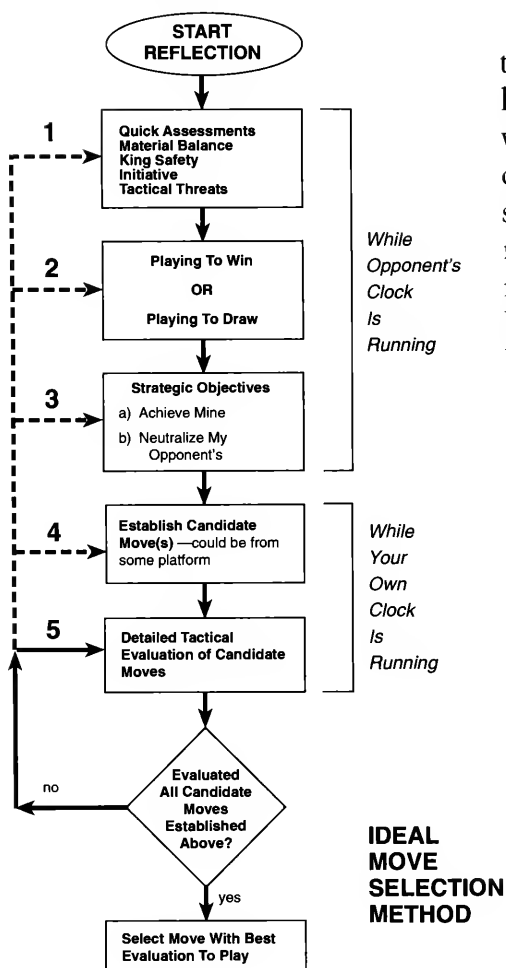


Figure 10

candidate moves may be different choices for the next move, or several possible continuations after one forced line is pursued several half-moves (ply) into the future (this is a candidate move from a platform).

After having decided on a “set of candidate moves,” each of these is now carefully evaluated on a tactical basis, one, two, or several moves into the future, and the final position evaluated. You could

When a player starts thinking about a move, a logical first step is to decide whether he’s playing to win or draw. To make that decision, he needs to assess the material balance, the imminent tactical possibilities for both sides, and the relative King safety.

After deciding whether to play for a win or a draw, he must establish or review the strategic objectives (usually, a strategic objective bridges a number of moves). The strategic objectives are both his own — he might be trying to maneuver a Knight to c5, for example — and the spoiling, or neutralizing, of his opponent’s — who might be trying to station a Rook on his seventh (on the player’s own second rank).

Now he might select some candidate moves. The

think of this evaluation as having a numeric score.

Finally, the player selects the move to play which had the best evaluation above.

In Figure 10, the circumstances in steps one, two, and three usually change much more slowly from move to move than those of the remaining steps. As a result, it makes sense to think about the first three steps while one's opponent is thinking about his move, allowing all of one's own clock time to be devoted to the details of the last four steps.

b. The structure of the real **Move selection Method**.

As with all general rules, the flow of Figure 10 is not meant to be followed slavishly. Sometimes, while evaluating a particular candidate move, one sees a different strategic objective for himself, or for his opponent, requiring a return to step three. That's the reason for the dotted lines in the figure.

The capability we humans have, through learning or inherited traits, is to streamline the process in Figure 10, to be able to get the maximum value for our thinking time in finding the best move. In contrast, a computer program must go through a detailed procedure (here, in Figure 10, it would have to go through every dotted path for every candidate move), therefore requiring a much greater number of steps in the evaluation. The "count material only" procedure for a "program," like the one in Appendix II, is very tedious, even when there are just three pieces on the board (including Kings), and the program was looking ahead only three half-moves. The program's **Move selection Method** for its simple position didn't include the complex procedure of Figure 10. It went directly to step four (simply, by brute force, considering every legal move a candidate move), then did step five by counting material at the end of a three-

ply search, taking the highest score evaluation in step five as the final answer in step seven.

One clarification is in order. In this computer example, you are White reflecting on your 61st move. The program will consider, for each possible choice of your 61st move, every legal Black response, and for each of those, every legal White 62nd move. When it counts material, it will arrive at a “material score” for each of your candidate moves — each of your possible 61st moves. For a particular candidate move, the program will form a number of groups; each group corresponds to one Black response to your 61st move. The material score for one group is the score corresponding to White’s “best” 62nd move. But the material score for the particular candidate move — which corresponds to all the groups reflecting that candidate move — is the *lowest* score among all the groups. This is logical, since Black is going to make his best move, representing your worst result. This sort of search is called a “minimax” search. Appendix II goes through this idea in detail.

It is important to clarify that every grandmaster doesn’t use the **Move selection Method** of Figure 10, even in a typical situation. As I understand it, former World Champion Boris Spassky doesn’t go through a mental listing of the candidate moves (step four in Figure 10). So the flow of thoughts of the **Move selection Method** of Figure 10 is a guide, a framework representing a sensible, but by no means the only, **Move selection Method**.

Allan Bennett’s **Move selection Method**, explained for the position in Figure 9 above (for his 36th move), did not consider any candidate moves other than the one discussed (36. Rc7†), with his analysis answering the question: Is this move okay to play? On the selection of his 36th move, his answer to the question was “yes.”

Looking at steps one, two, and three of Figure 10 while it's your opponent's turn, and *not* looking at these while it's your turn, is a generalization. As with most generalizations, there are exceptions where a player needs to think about the first three steps while it is his turn to play.

An exercise appeared in *Chess Life* which is some measure of a combination of *Images*, **APROP**, and **MM**. You are White with a Knight at a1 in Figure 11. Your objective is to reach each square on the first rank in turn, namely, b1, c1, ... h1, by making moves of your choosing with the Knight. Your white Knight must not capture any of the pawns, nor is it permitted to land on any square where it could be captured by a pawn. After landing on each square on the first rank, your Knight must next reach h2, and then head back toward a2 by eventually reaching each square of the second rank (except those controlled by the pawns).

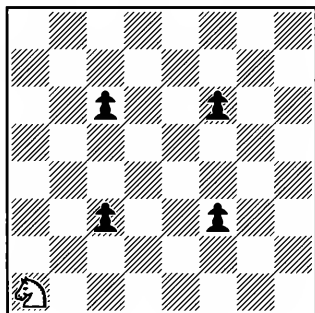


Figure 11—White to move

The objective is to make the snakelike journey from a1 to a8 in the shortest possible time, but not necessarily in the least number of moves.

One of the players at our club (“C” strength) obliged us by doing at least the “first two rows.” We videotaped him so that we’d be sure to be able to

reconstruct his moves. Since only a Knight is involved, we've left off the Knight designation, and listed only the successive destinations of the Knight's journey for the first couple of rows. Should you be interested, they were: N**a1-c2-a3-b1-a3-c2-b4-a2-c1-d3-f2-d1-e3-c2-e1-c2-e3-f1-e3-g4-f2-h3-g1-h3-f2-h1-g3-f1-h2-g4-e3-g2** (illegal) **-e3-g4-h2-g4-f2-e4-f2-d3-b4-c2-b4-a2**. He took 2 minutes and 40 seconds to get this far. His true score (for the first two ranks) should be 2 minutes and 50 seconds, including a 10-second penalty for the illegal move. If he did all the rows at the same rate, he would have completed the exercise in 11 minutes and 20 seconds, which is somewhat unfair, since the experience of the first two rows would allow him to play somewhat faster in the other six rows.

As a point of reference, the *Chess Life* article (December 1971) pointed out that strong club players should take around seven minutes to complete the entire Knight journey from a1 to a8 (all the times mentioned here are for the first trial), and that being able to do this journey in under five minutes means you may have the talent to become an international player. The ten grandmasters named in the article did the journey in from five down to two minutes.

Images are involved, since we all have rapid mental recall of at least some of the patterns of two, or even three or four, Knight-move sequences. **APROP** is invoked simply because speed is a factor, and there is an employment of look-ahead of known move patterns. The **Move selection Method** is a part of this because a studied and deliberate connection between some of these *Images* is required, and this goes beyond the normal bounds of **APROP**. The really significant issue is how well one does on the first trial. Subsequent tests bring in other factors not really

related directly to our major three components of chess strength (*Images*, **APROP**, and **MM**), such as learning speed.

As might be expected, grandmasters do much better at this exercise than we ordinary players do. There are some other details on this exercise in Stephan Gerzadowicz' new book *Thinkers' Chess*.

3. Blunders.

A "blunder" is a tactical miscalculation within the player's Analysis Horizon which leads to a serious worsening of the position. The miscalculation is caused either by projecting a position incorrectly in the look-ahead or by using an incorrect method to select a move. An incorrect strategic plan, however, is not a blunder.

A reasonable expectation for a chessplayer would be to select moves in such a way that, within his *Analysis Horizon*, he is analyzing 1) with uniform accuracy, and 2) all branches of analysis for a similar number of half-moves ahead. He may truncate the analysis of certain branches in fewer half-moves than his *Analysis Horizon* when the situation warrants (an example might be that he has a four-ply *Analysis Horizon*, but along one particular branch, he can capture his opponent's Queen on the second ply, closing off that line for his opponent).

If, while working on the selection of his move, a player fails to consider a mate his opponent has available on his next move, he is violating the expectation of the previous paragraph, and blundering. This blunder is a failure in **MM**, and not in **APROP**, since he did not project a position incorrectly. He simply didn't project the position.

Some blunders are a result of a fault in the **MM**, while others are the result of an error in **APROP**.

Here you might think: “Why struggle with all this stuff; aren’t blunders like car accidents — you just hope you don’t have one?”

Exactly! Blunders *are* like car accidents: there are patterns of errors leading to these, so that most types of blunders tend to recur.

It is worthwhile to devote some space here to blunders, since blunders can be rooted out to some extent, as will be discussed in Part III.

A typical blunder, one I made recently in the game Art Nugent–Wetzell, arose from the position shown in Figure 12.

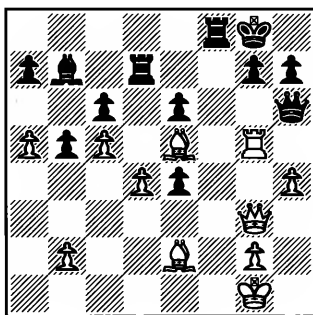


Figure 12–White to move

Black has the Exchange and a pawn, but White has a beautiful Bishop pair and the initiative. Black’s Queen is tied to the defense of g7, but can be potentially overloaded, which White did by playing **45. Bg4**, threatening to win instantly with **46. Bxe6†**, since **46... Qxe6** leads to mate by **47. Rxg7† Kh8** (or **47... Rxg7 48. Qxg7 mate**) **48. Rg8 mate**. Also, if **46... R7f7**, White has mate in two with **47. Rxg7†** and **48. Rg8**. After White’s move from the diagram, **45. Bg4**, Black can move the Rook on f8 to either f7 or e8, when we still have a chess game. I however, failed to connect the themes, or, if you prefer, the one grand theme, and viewed the two threats **46.**

Rxg7† and 46. Bxe6† separately, since the pawn at e6 was being defended by the Queen for a good portion of the game. For the first time, Black's Queen is overloaded, and I failed to recognize that. I made a move elsewhere on the board, and resigned when White played 46. Bxe6†. The blunder was not an oversight in **APROP**, since I saw the correct position, as well as the captures and defenses.

4. Should-A-Beens.

A “Should-A-Been” is a tactical miscalculation within the player's Analysis Horizon which does not lead to a serious worsening of the position, due to the good fortune of the placement of the pieces.

An example of a Should-A-Been, one I made recently in Wetzell–John Loyte, occurred in the position of Figure 13, with White to move.

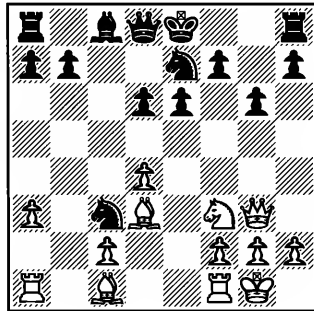


Figure 13–White to move

Black has a pawn, but White has a compensating initiative. In my haste to obtain a positional plus, I played 13. Bf4, thinking that Black must advance the d-pawn since he cannot defend it a second time, giving White the important e5-square. Black could not play 13... Nf5, I reasoned, since I would capture the Knight and continue with 15. Bxd6. It turns out,

of course, that White cannot play 14. Bxf5 in this line, since Black has the winning fork 14... Ne2†. Play continued (after 13. Bf4) 13... Nf5 14. Qg5 f6 15. Qg4 e5 16. Bd2 Nxd4 17. Qh4 (the only move, since 17. Qg3 is met with repeated Knight checks at e2, winning the Queen). Here Black could have played 17... Nxf3†, shattering White's pawns and being two pawns up for the moment. But after Black moves his Knight out of danger on his 18th move, White has 19. Bxg6†, and it turns out that his game is okay.

So, White, instead of being lost after 13. Bf4, still had an okay game, due to the fortunate position of the pieces on the board. White was just plain lucky not to be lost with that move.

Now why do we go to the trouble of inventing a new word like Should-A-Been? As you might expect, it's short for "should have been a blunder." The reason is that many chessplayers, although jarred and affected by blunders, tend to ignore Should-A-Beens, when in fact they're equal, in terms of representing shortcomings in the armor of *Strength*.

As we'll see in Part III, blunders and Should-A-Beens need to be a point of concentration for our study program.

D. Attitude.

One would expect that *Strength* would be truly reflected by its three major components covered so far, namely *Images*, the Ability to PROject Positions (APROP), and the Move selection Method.

But *Attitude* — and here we mean a composite of various manifestations of the individual's personality and character — has a direct influence on *Strength*. Are you personally, or have you ever witnessed, a really tenacious defender? Not one who's

playing long after he or she should have resigned, but a stubborn, hard-working defender? You can almost sense how that quality will stand its owner in good stead, contributing directly to *Strength* by salvaging draws here and there, and turning drawish positions into wins.

We'll identify these attitude factors here, then discuss them in more detail. They are objectivity, time management, discipline, on-line toughness, physical fitness, and several other personality manifestations.

All people have, to one degree or another, certain idiosyncrasies, personality traits, and other special prejudices. These hang-ups, which are part of the human condition, will modify *Strength* from that comprised only of the "three purely technical" components.

These human factors prevent us from reaching the ideal *Strength* based only on our three main components, *Images*, **APROP**, and **MM**. We'll take an upbeat view of this phenomenon. We'll call this worsening of our playing strength due to personality hang-ups, when averaged for all players, as the "norm," so without any additional knowledge, you and all other chessplayers are at this norm. Statistically, grandmasters will be considerably better than the norm. They'll have fewer hang-ups. Masters will be above the norm too, but to a lesser degree than grandmasters, and so on down the line.

1. Desire.

The interest one has in chess, and one's improvement, is embodied in the desire one has. It is the driving force behind everything in chess. Discipline is the direct descendant of desire. The more desire, the more likely that a disciplined plan will be in

place to improve one's game.

I believe that desire is a reflection of what chess means to a player, how important it is, and where chess fits into his or her life.

2. Objectivity.

Objectivity is the state of mental receptivity allowing evaluation without bias or prejudice.

The manifestation of objectivity that comes to mind is the evaluation of a position, making a judgment whether one should play for a win or a draw. Or if one should offer a certain sacrifice. Here, the issue is not whether one has the technical knowledge to make the right decision, but whether one is distorting this knowledge, subconsciously, to make the evaluation consistent with some preconceived idea.

We may be prejudiced about our opponent's *Strength*, or what it takes to win.

The more objective a person is, all other things being equal, the better a chessplayer he is likely to be.

3. Time Management.

a. Introduction.

With the introduction of chess-clocks in the 19th Century, the management of time, or the management of the clock, became an important part of the game, and the proper handling of the clock a Component of Chess Capability.

Today, a typical club match or tournament proceeds at 40 moves per hour, with subsequent time limits at the same rate of play, usually at 20 moves per half hour. The US Open is played at 50 moves in two and a half hours, while the World Champion-

ship is played at 40 moves in two and a half hours.

Recent developments in the US are creating interest in “Action Chess,” played at 30 minutes sudden death — one must play all moves, to the mate, in 30 minutes, or suffer sudden death, which is a game forfeit. This is also called “30 smash.” Five minutes sudden death, a similar but shorter game, is called Blitz, or “five smash.”

Figure 13A reflects the different types of time control in use today. Both scales, the number of moves, and the time allowed, are on ratio scale, or logarithmic scale. The circles with x’s represent time controls, where the sudden death time controls are shown at 240 moves.

Whatever the time limit, and let’s say it’s 40 moves per hour, there are two major factors in the proper handling of the clock. The first is the avoidance of time pressure. The other is the proper scheduling of extra time to evaluate critical positions.

Why the big deal, you may ask. What makes time management such an important issue? You can divide up the time differently, but you still have the same total, so doesn’t that pretty much negate time management as a Component of Chess Capability?

The answer is an emphatic *no*, and for two major reasons. First, let’s say you have three minutes to make two moves. You might take a minute and a half for each move, or you might take two minutes and 50 seconds for the first, and ten seconds for the other. The average quality of the two moves for the first choice is vastly superior to the second. We’ll get back to that later.

Second, it is important to spend extra time on certain positions. Allocating this time properly affects *Strength*.

This assertion is an important part of my chess theory.

Most chessplayers, in the cool light of day, undoubtedly agree with this statement. The major dissenting rationale I've heard is that if a player takes

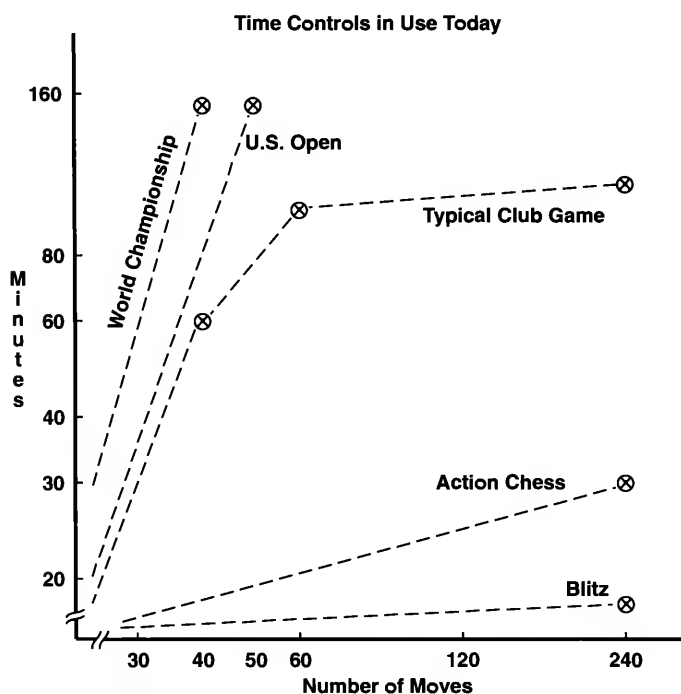


Fig. 13A

more time in the first group (say 25 moves) of a 40-move time control, he can obtain a stronger position than he would otherwise, making the remaining moves easier to play, and to a sufficient degree to offset the relative shortness of time. I think that this is untrue, over a large number of games (it may, of course, be true in a particular game). We'll return to this topic, and ways to combat the **Time Pressure** problem in Part III.

So allowing oneself to get into **Time Pressure** reduces *Strength*. But how much? I believe that getting into simple **Time Pressure** routinely, and extreme **Time Pressure** let's say in one-third of the

games, will reduce *Strength* by about 125 rating points, give or take 50. The suggested test program in Appendix I should eventually answer this more exactly.

Should you be unfamiliar with the US Chess Federation's rating system (the World Chess Federation's rating system is similar), we'll briefly review the statistics given earlier: a rating difference of 100 points means that the higher-rated player will win 64 percent of the time. In an eight-game match, he'll win just over five games, on average. So the typical score of the match might be five wins and three losses, or four wins, two draws, and two losses. A rating difference of 200 points means that the higher-rated player will win an average of 76 percent, slightly more than three out of four, of his games. According to my theory, then, a player equal in *Strength* to another in all aspects except for his tendency to **Time Pressure** would only win, typically, between five or six games in a 16-game match, depending on the severity of his **Time Pressure**. A pretty hefty freight to pay for this affliction.

On balance, then, over many games, a player will have better results — he will play stronger chess — if he plays all his moves at a steady pace, instead of slower and more deliberately at first, and more rapidly, or in Time Pressure, at the latter part of the time control.

b. Time Pressure.

What is Time Pressure?

It would appear logical that if you played at a steady pace so that you would not have to rush your last moves, over the long run you should obtain better results than if you took longer during the early

moves and had to rush your later moves.

Now it would be nice to quantify this time pressure.

(i) **Time Pressure** in fixed-move time controls.

Normal time controls allocate specific periods of time for a fixed number of moves. This contrasts with “Game-60,” “Game-30,” or “Game-5” time controls, where all the moves, to the mate, need to be made in the allocated time.

If you are playing a game at 40 moves per hour, and you have just made your 30th move and see that you have seven minutes left, are you in **Time Pressure**?

The time control sets a schedule. In this case, you have 60 minutes to make 40 moves, or one and a half minutes (90 seconds) per move. After 10 moves, you should have used not more than 15 minutes, after 20 moves not more than 30 minutes, and so on. If you use your time in such a way that you must make your remaining moves in the time control, on average, at twice the original schedule in order to avoid a time forfeit, you are in *simple* **Time Pressure**. If you have to make your remaining moves at five times the original schedule, you are in *extreme* **Time Pressure**.

In the case just described, you have seven minutes to make 10 moves, or seven minutes x 60 seconds, or 420 seconds, to make 10 moves, which is 42 seconds a move. You are in *simple* **Time Pressure**, because 42 seconds is less than half of your allotted 90 seconds per move. If you had just three minutes left when you made your 30th move, you would be required to make 10 moves in 180 seconds (3×60), which is 18 seconds per move, or one fifth the scheduled 90 seconds per move. In that case you would be in *extreme* **Time Pressure**.

Describing this scenario graphically for a 40 moves in 60 minute time control let's say a player completed his 10th move with 45 minutes left, his 15th with 30 minutes left, his 20th with 10 minutes left, his 30th move with 5 minutes left, and his 35th with 1 minute left. He made his 40th move with his flag hanging. Fig. 13B is a "move-time metric" and displays his clock performance during this time control.

Figure 13C is the same space-time metric for the time control, but this time showing performance zones, where here performance relates to the handling of the clock. The heavy line through the middle of the metric is the schedule line. Making a move every minute and a half will keep a player on the heavy line. Playing at a quicker pace generates a move-track which brings one below the line, and playing at a slower pace will bring the player above the line.

By comparing Figures 13B and Figure 13C (see next page), the player is on schedule for the first ten moves, then fell behind schedule during moves 11-17, got into simple time pressure at around move 18, then crossed into the extreme time pressure zone about move 34. At move 35, with one minute to play 5 moves, he's definitely in extreme time pressure.

(ii) Time Pressure in Action Chess.

Sudden-death time limit chess is different from chess played with normal time controls. Accordingly, **Time Pressure** and move schedules will be defined somewhat differently.

In Action Chess, or 30 minutes sudden death, we'll divide the entire "clock," the 30 minutes, into six time segments of five minutes each. In each of the first three segments, one should make 15 moves, translating to 45 completed moves when three segments, or 15 minutes, have been used. There will

Move-Time Metric for a 40 moves in 1 hour time control

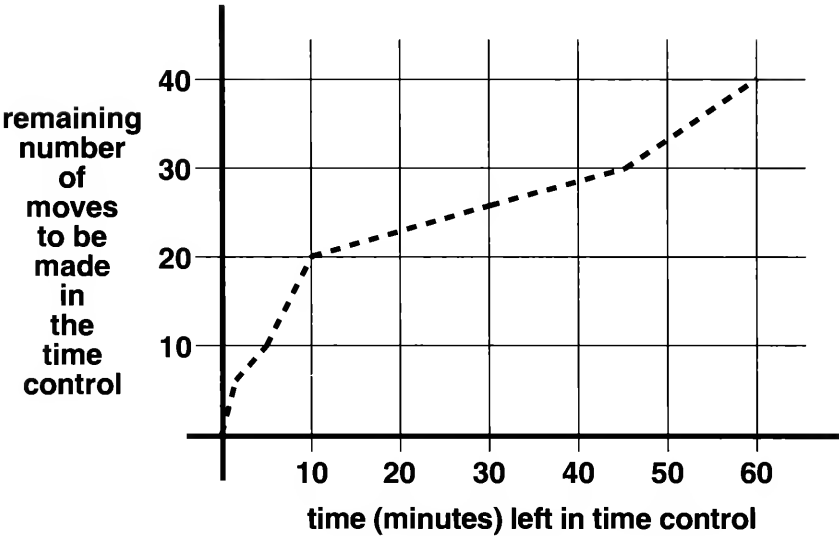


Fig. 13B

Move-Time Metric for a 40 moves in 1 hour time control.

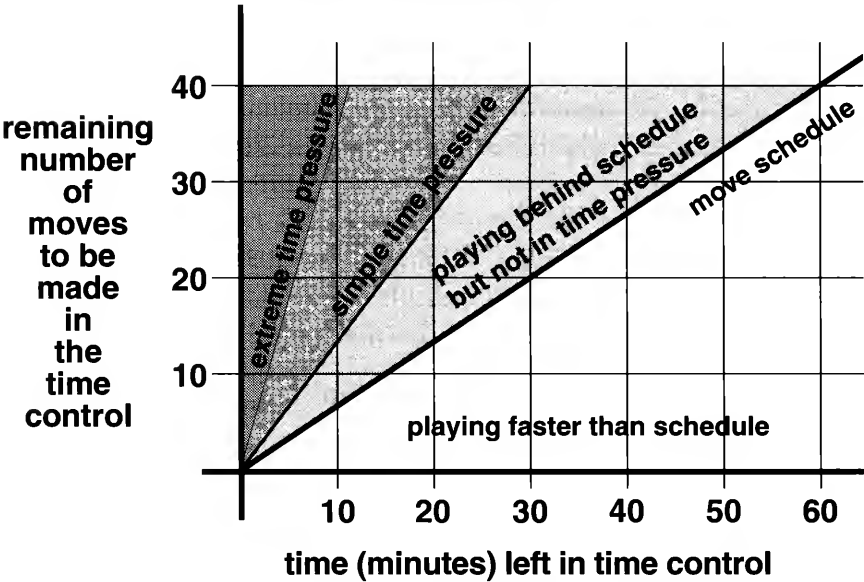


Fig. 13C

then be 15 minutes left. Often the game is decided by the 45th move. But if the game is not decided, the pace must be picked up, because 150 moves, or even more, may be necessary to accomplish mate. Even though most games played with normal time controls (not of the sudden-death variety) are over at 70 moves, the situation implied at resignation is that one's opponent will be able to deliver mate eventually, since there are few limitations on the number of moves required (it might take 100 moves to mate). In a sudden-death time limit, it might take many more moves, because there isn't enough reflection time to generate the win in an efficient number of moves.

Getting back to the timetable, you should make 20 moves each in the fourth and fifth time segments, or four moves per minute.

Keeping this timetable will allow you to play somewhat sanely for the vast majority of games. Seldom will you get into a situation where you have a complicated middlegame position with only five minutes remaining, since you will have made 85 moves.

With five minutes left, and the game still not decided, what next? You are no longer required to keep score. In order to keep track of the number of moves you've made, you need a counter.

I use a "hand tally counter," stock #1901, made by the W. T. Rogers Company, Madison WI 53711 (you can get this device through a stationery store, or call or write to the company directly — about \$13). It's a mechanism the size of a walnut, with a plunger and a "window counter." You can, of course, also use one of the plastic counters that people use in a supermarket, usually available there, to keep track of their purchases. The counter I recommend costs more, but is simpler to operate, has only one plunger,

and so on.

Back to the game. You have kept up with the recommended schedule for the first 25 minutes, having made 85 moves. Now you must play at the rate of 10 moves per minute. If you're exactly on target, you will have made 135 moves when your flag drops. That's OK.

How do you know whether you're keeping up with your "last five minutes" schedule? Simple. As you approach the last five minutes, you must make two columns on your score sheet, with four lines each, the left column showing the entries 4/10; 3/20; 2/30; 1/40; 0/50. At the time your clock shows five minutes left, you may stop keeping score. At this time, you start using your counter — set to zero. The entry 4/10 means that with four minutes left on your clock, your counter should show 10 moves. 3/20 means that with three minutes left, your counter should show 20 moves, and so on.

It is noteworthy that most players will not be keeping up with your schedule. The logical extension of this is that most players mishandle sudden-death time controls. They will have made too few moves with half, and with a quarter, of their "clock" remaining.

You will time forfeit far fewer games in sudden death time controls than most other players by using a move counter and striving to adhere to a schedule.

Again, you are in simple **Time Pressure** when you have, for any given number of moves completed, only half the scheduled time left, and in extreme **Time Pressure** when you have only one fifth the scheduled time left. In the case we're discussing, if after 45 moves you have only seven and a half minutes left, or less, you are in simple **Time Pressure**; if

you have three or less minutes left, you are in extreme **Time Pressure**.

The move-time metric is of a different nature for those time controls where mate must be achieved, rather than that a certain number of moves need to be completed. Figure 13D shows this metric, with its zones of time-pressure, for a Game in 30 time control. For example, if a player with 5 minutes left has completed 100 moves, he is above the heavy line and playing ahead of schedule. If he's completed 85 moves, he's just on schedule. With 70 moves com-

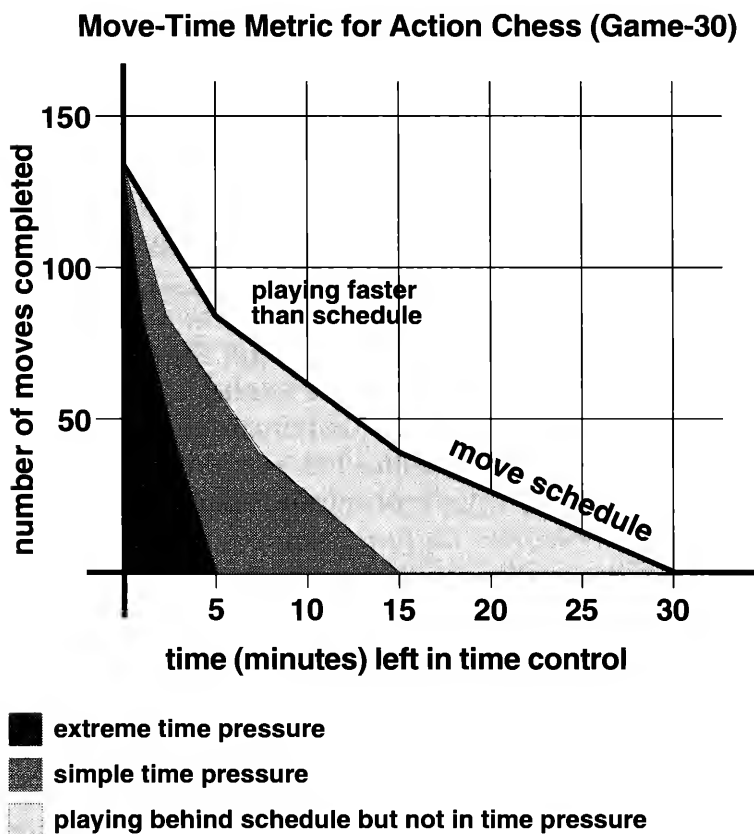


Figure 13D

pleted he's behind schedule but not in time pressure; with 40 moves completed he's in simple time pressure; and with 15 or fewer moves completed he's in extreme time pressure.

(iii) **Time Pressure** in Blitz Chess.

In principle, time management in Blitz is very similar to time management in Action Chess.

It simply is not true that Blitz Chess means that you're in continuous time pressure. Such a statement would rob us of the ability to differentiate, or calibrate, the *seriousness* of the time pressure.

You need to make 15, 20, 25, 30, and 35 moves, respectively, for the first, second, third, fourth, and fifth minutes.

Now, how are you going to know how many moves you've made up to some point in the game? The counter described in the previous section allows you to keep track of the number of moves without recording them on the score sheet.

Let's turn to our schedule for time management for Blitz Chess. Your counter must show 15 moves completed with four minutes to play, 35 with three minutes to play, 60 with two minutes to play, 90 with one minute to play, and 125 by the time your flag falls. Again, a lot more moves than most players make.

Figure 13E shows the move-time metric for Blitz chess.

c. **Relative Time Pressure.**

An important concept, as a possible alternative to the general yardstick and introduction to the subject of **Time Pressure**, is "relative time pressure." This is the time you have *relative to your opponent*, regardless of the time you have left to make each

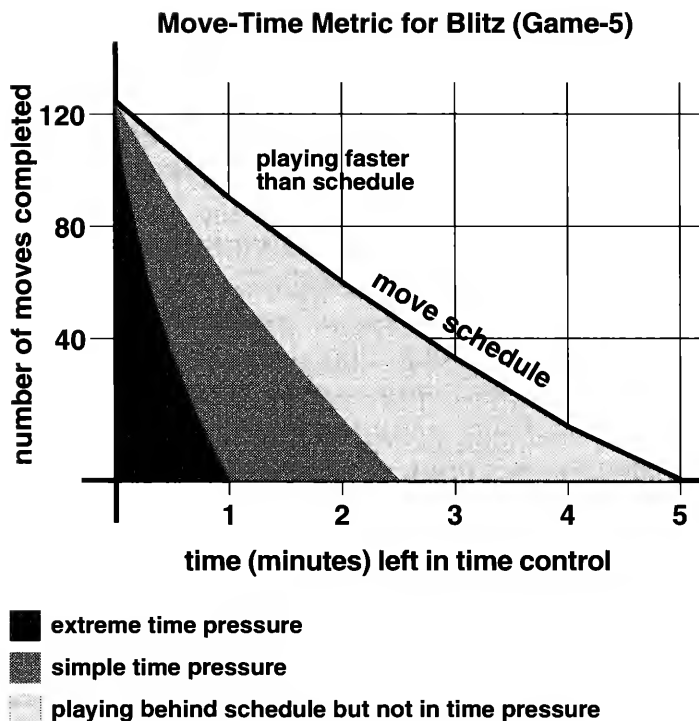


Figure 13E

move, or regardless of how many moves you must still play. In a “40-in-one-hour” time control, you may have four minutes left to make the last 10 moves, while your opponent has only one minute. You are obviously in good shape, timewise, relative to your opponent. In tournaments, two very strong players often are in time pressure, by the definition in this book, where one player often relies on “relative **Time Pressure**” as a yardstick.

More about relative **Time Pressure** in Part III.

d. Allocating extra time in critical positions.

The previous discussion should not imply that each move should be made slavishly in the same

reflection time. Technically forced moves should be made within a very short time — maybe a second or so. On the other hand, more reflection time is needed when making a move in a critical position.

What constitutes a critical position?

Any position where the next move has a *much greater effect* on the outcome of the game than a normal move is a critical position. Now, one can debate that any move is critical, because any poorly executed move can lead to defeat. True. But for practical purposes, two categories of critical moves suggest themselves. They are 1) moves involving the making of a plan (as opposed to moves which are really links in a chain of moves making up a plan), and 2) moves involving sacrifices, either contemplating your own, or deciding whether to accept your opponent's sacrifice.

The plan referred to directly above could be the *transition plan*, where one is planning the entry into the middlegame, or a plan relative to entering an endgame, or any other plan extending over more moves than one normally contemplates while selecting a move.

The sacrifices referred to include both making a sacrifice (either of position or material) or contemplating accepting a sacrifice from one's opponent (sometimes a choice is available — you need not accept the sac). Evaluating the soundness of a sac typically takes longer than a normal move selection because it usually needs to be evaluated further into the future.

Extra time for critical positions should only be

Creating a plan typically takes longer than selecting any of the succeeding moves which support that plan.

taken when one is ahead of the time schedule advocated above.

Having time available for critical positions without getting into **Time Pressure**, then, is part of good time management (details in Part III).

4. Discipline.

Discipline is one manifestation of personality. During a game, discipline manifests itself by the degree to which you “hang tough.” A specific example of good discipline during a cross-board game is the avoidance of weakening pawn moves. I’ve found many times that a crisis *seemed* resolvable by making a pawn move, but later, during analysis, it turned out that the pawn move was not really necessary — it was in fact weak, but I had just made it because I was exhausted by looking for other ways out of the difficult position.

Here, again, discipline is the policeman, making sure one tries very hard, trying every resource, before giving in to the pawn move.

Usually the force behind discipline is the desire to improve one’s *Strength*. Discipline is the follow-through for desire. It results in the “sticking to a schedule” for studying endings, or whatever the subject of study happens to be. Discipline also includes the steadfastness of listening with an open mind to a weaker player who has just won a game from us and is offering some thoughts in the postmortem.

5. On-line toughness.

Strength is influenced by whether you “hang tough” during the game, and to what degree you do so.

One can hang tough during a game, and be very accommodating during a postmortem — since that

doesn't affect *Strength*.

The late Lyle Alzado, formerly on the Oakland Raiders of the National Football League, once related a humorous anecdote to Johnny Carson on *The Tonight Show*. In a sharp exchange with someone using profanities, Alzado recalled how he told that person that he would not tolerate that kind of language "off the field."

Although meant to be entertaining, I'm sure the remark rang true. On the field, he used every prop to bring on the adrenaline — profanities just helped him with that. Of course, we can't use profanities in a chess game, so we must think of other props to keep hanging tough.

The more determined a player is during a game, the more he "hangs tough," the more likely he is to find an obscure resource to salvage a draw in a difficult position, or a win in an apparently drawn one.

We'll return to this topic in Part III.

6. Physical fitness.

Physical fitness has two important indirect effects on *Strength*.

The first one involves fatigue. The degree of physical fitness has an effect on determining the onset of fatigue in the later hours of a game. Most of us who are not grandmasters tend to play in tournaments where more than one game is played in one day. Fatigue increases the likelihood of blunders; therefore, the more physically fit the player, the less fatigue will compromise his level of play.

The second aspect involves longer waking hours. Although I have not seen any articles on the subject, I believe that a more physically fit person will need somewhat less nightly sleep. An increase in waking hours of half an hour (I think it's considerably more)

is possible, and may be used for chess study, increasing *Strength*.

I share the typical perception of fitness: one is physically fit if one's weight is at the desired level, if one does some exercise on a regular basis — brisk walking being fine — and one maintains reasonable eating habits. Although we'll not include stress levels directly as part of physical fitness, a lower stress level allows fewer distractions, better concentration on the game, and therefore greater *Strength*. The stress we're talking about here is not the stress of the chess game, but the general level of stress encountered during the day.

Former World Champion Botvinnik was a model of fitness. Another former World Champion, Boris Spassky, similarly made a point of being fit. He was shown playing tennis on the cover of *Chess Life*. The current World Champion, Gary Kasparov, is perhaps the most adamant among the world champions in terms of stating and personifying physical fitness.

7. Personality influences.

Certain abnormal preferences, or hang-ups, show up on the chessboard, which, on balance, detract from *Strength*. These preferences, which we will get to momentarily, are undoubtedly caused by some personality trait.

In studying my own games, I have discovered several of these abnormal preferences. I'm sure there are others, some of which I simply haven't discovered. There are probably some which I'm fortunate not to have, but others do. Let's look at a few of mine.

- a. The most economical capture.

This abnormal preference takes the form of capturing with the “piece of least value,” or the cheapest piece, since it represents the smallest investment. Put another way, I apparently have a subconscious preference for capturing with a pawn instead of a piece.

In studying the combination of Figure 14, from *The Complete Book of Chess Stratagems* by Reinfeld, I chose 1. **exd7†**, winning eventually after 1... **Kd8** 2. **dx c8=Q†** **Kxc8** 3. **Qxf6**, etc. I chose the original pawn capture in line with the “cheapest capture.” Much better is 1. **Bxd7†** **Kd8** 2. **Bc6†** **Qxd4** 3. **e7 mate**.

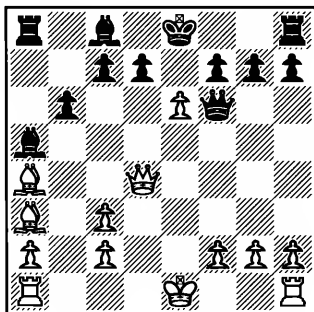


Figure 14—White to move

In Solitaire Chess, one takes a game between two strong players, usually grandmasters, selects one of the players as one’s consultation partner, then covers up the score sheet and tries to determine the move made by his partner in the position, with the chess-board set up to that position. After comparing the move selected with the move actually made, one records and grades the move, then makes the move on the board that was actually played by his partner in the game, as well as the opponent’s reply, and

repeats the process. Here I was playing Solitaire, and, guessing White's moves in Figure 15, I selected 1. c5 in accordance with the faulty "attack or capture with the cheapest piece," which would allow Black to complicate with 1... Bd5†. Now 2. Nf3?? is met with 2... Nxf3!, and 2. Ne4 leads to 2... fxe4 3. dxe4 Qe6. My "cheapest piece attack" idiosyncrasy distracted me from the very simple 1. Bc5! leaving Black helpless.

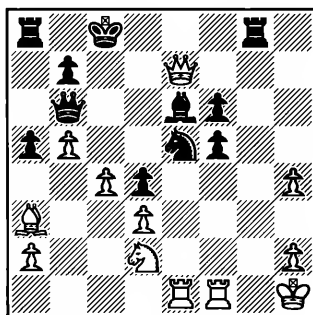


Figure 15—White to move

b. The specific-piece obsession.

It is generally well-known that a Bishop pair on an open board is stronger than a pair of Knights, or a Bishop plus Knight; also, that a Bishop is superior to a Knight. But I have the problem of inflating this difference, considering positions which are somewhat cluttered as "open board positions." In Figure 16, I was playing Solitaire, attempting to emulate former World Champion Mikhail Botvinnik in Botvinnik–Sorokin, USSR Championship, Moscow 1931.

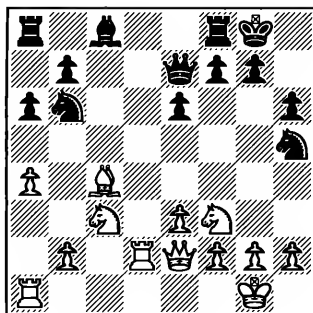


Figure 16–White to move

Here I chose **17. Bb3**, avoiding the exchange of Black's Knight for the white Bishop at c4. I selected that move in fear of losing the minor exchange (losing the Bishop for the Knight), not even looking at the move Botvinnik chose, namely *17. Rad1*, threatening *l8. Rd6*, practically paralyzing Black. As it turned out, Black did not play *17... Nxc4* because of White's big space advantage after *18. Qxc4*.

c. The Wetzell Queen Paralysis.

There is a curious abnormal preference which I have, and am struggling to eliminate, with the Queen. I call it the Wetzell Queen Paralysis.

The beginner often uses his Queen in the opening as a raiding piece, because of its great power and ease of handling. Soon he finds that this is not sound because his Queen is easily harassed by minor pieces and pawns. The ensuing caution can be overdone to the point of keeping the Queen out of harm's way to an excessive degree, and thereby missing good opportunities.

In Figure 17, I was again playing Solitaire, emulating Botvinnik in Botvinnik–Taimanov (Match for the USSR Championship, Moscow 1953). Here

Botvinnik played 17. *Qf3*, concentrating his forces on the K-side and safeguarding e4, so that Black couldn't play ...*Nfe4*. My move choice was 17. *Rb1*, never really looking at the Queen move, thinking erroneously (subconsciously) that "it wasn't time yet to bring the Queen out" and she was "safe at home."

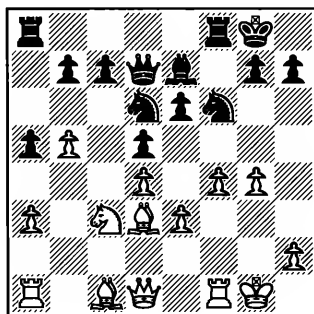


Figure 17—White to move

- d. Playing to impress the spectators.

All of us like to show off now and again, to various degrees.

Let's first clarify what showing off is, and is not.

In the swashbuckling days of the 19th Century, it was common practice to announce a mate in five, or even less, moves. Nowadays, this practice has largely disappeared. Making an incorrect mate announcement tends to be distracting and somewhat belittling to the opponent (I would resign any position where mate is unavoidable, and I'm convinced my opponent knows the mating procedure) because it implies that one's opponent doesn't know what's going on.

So announcing mate is a form of showing off.

On the other hand, sacrificing one's Queen for a clear mate, instead of sacrificing a minor piece for an overwhelming position which one is sure to win, is not showing off. Sacrificing the Queen is the correct

move.

But sometimes we might select a move or sacrifice which is flashy, when a simpler procedure, less flashy, maybe not involving a sacrifice, is also very strong. This is showing off.

In Figure 18, Joel Johnson–Wetzell, Westford MA, 1988, Black, on the move, would be able to mate with $1... Ra8$ were it not for the Knight at c7. $1... Rc8$ is simple, threatening to win the Knight, when White is lost because if $2. Nxb5$, then $2... Ra8†$ anyway and Black mates on the next move. I'm not sure if I looked at $1... Rc8$, but I know I looked at $1... Re7$, which is also forcing and simple.

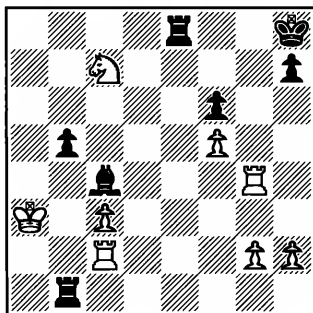


Figure 18—Black to move

I remember being enthralled with the sacrifice $1... b4†$, since if $2. cxb$, then $2... Re3†$ $3. Ka4 Ra1†$ and mate next, and $2. Ka4$ (instead of $2. cxb$) would, I thought, also lead to mate after $2... Ra1†$.

$1... b4†$ was bad, because after $2. Ka4$, $2... Ra1†$ would have been met with $3. Kxb4$ and Black, without previously planning for this contingency, would be left with two pieces hanging. $1... b4†$ was a *Should-A-Been*, because after $2. Ka4$ Black luckily had $2... Bb3†$ $3. Ka5$ (or $3. Kb5$), allowing $3... Re5†$ and $4... Bxc2$ winning.

My overlooking $3. Kxb4$ (after $1... b4†$ $2. Ka4$

Ral†) was caused by trying to show off.

e. Playing to a predetermined result.

Feeling that one should be able to win every game, or “playing to a predetermined result,” is a common problem, and one I have been struggling with for a long time. It would appear that feeling that one can win every game should be an asset, not a liability.

What tends to happen, however, is that the game usually does not proceed as one would like. Feeling that one “should be winning by now” produces tension. That tension is likely to result in a tension headache, which in turn directly influences one’s game because it interferes with the ability to concentrate. And it all arose from the faulty premise that something should be true which isn’t (being able to develop and accrue advantages based on some time schedule, or move schedule).

E. Genetic factors.

It would appear fairly obvious that our genetic makeup — our genes — affects our chess strength directly (during a game) and indirectly (by the clarity and speed with which we can absorb new information).

I have simply identified two of the key genetic factors: mental clock rate and memory.

1. Mental Clock Rate.

Mental Clock Rate is the speed at which one can go through a chain of thoughts, heel to toe. It might be a simple arithmetic chain problem that can be done in one’s head. Example: Calculate $2 + 3$. Take

the result and multiply by 15. Take the result and subtract 17. Take the result and divide by 2. Take the result and subtract 12. Take the result and multiply by 13. Take the result and subtract your age. What's the answer?

As with all things, there's a big risk of generalizing unfairly. A person might have a lightning fast brain, but be terrible at math, resulting in doing poorly in this exercise. For the purpose of explaining **Mental Clock Rate**, pretend that we're all equally good at math.

Let's clarify what **Mental Clock Rate** is not. It has nothing to do with how clever one is — or applying tricks or shortcuts. It has nothing to do with how resourceful one is, either.

I've heard that we humans have a biological clock, a mental clock, of about ten thoughts per second. It would appear that if we can operate at ten thoughts per second, they must be the simplest thoughts — not even a simple addition problem, but something much less complex than that. An expert typist can type 90 words per minute. An average of five letters per word plus one space, or six keystrokes per word, would correspond to six times 90, or 540 keystrokes a minute, roughly equal to ten per second.

In pondering that, counting came to mind. I've been composing this material (in handwritten form) in a fast-food restaurant during their quiet times. I just happen to have, surprisingly, one of the older-type mechanical movement stopwatches that I have been using for running. The stopwatch operates at ten beats per second, or one tenth of a second per stroke.

Using the stopwatch timing mechanism to start and stop the watch, next to my ear, without of course being able to see the watch face, I wondered whether we humans can count the strokes. If I started the

watch, I wondered, counted 100 strokes, and then stopped the watch, would it read ten seconds?

I did it! During several separate trials, results came up close to ten seconds each time — typically, within three to five tenths of a second, or a three- to five-count error in a hundred. To make an attempt at being scientific, I questioned whether I was counting at all, or simply trying to guess when ten seconds were up. So to prove that I was indeed counting, I tried a different experiment several times. I held the stopwatch under the table, where I couldn't hear it ticking, started the stopwatch, estimated ten seconds, and then shut off the stopwatch. It turned out that my errors were much greater in this experiment, often as much as ten to 15 strokes. So in the original experiment, I was obviously counting. The fact that, typically, there was a two- to five-stroke error shows that I was at the edge of my **Mental Clock Rate**.

This was hardly a scientific test, but it indicates that events occurring at intervals of one tenth of a second can be counted by the human brain.

In pursuing this line of reasoning, I suspect that if I tried to count 200 strokes of a stopwatch running at 1/20th-of-a-second intervals, I would get hopelessly confused.

We're all different, and some of us have a higher **Mental Clock Rate** than others (those with higher **Mental Clock Rates** could probably count stopwatch strokes of shorter intervals).

The impact on *Strength* of a higher **Mental Clock Rate** is very plain. If you can figure out something in ten seconds that your opponent takes 20 seconds to figure out, in a 40-moves-in-one-hour time control, it's more or less the same as if you had correspondingly more time and you both had the same **Mental Clock Rate**. An example would be the analysis, or calculation, of a forced tactical sequence,

a single string of moves. The time of calculation of this string of moves resembles somewhat the counting of stopwatch strokes, because they are both sequential in nature.

During the 1960s and 1970s I've had the opportunity to play on the "outside" of various simultaneous exhibitions by grandmasters, and what struck me was that Bobby Fischer and Walter Browne played very much faster than any of the other grandmasters I've had an opportunity to play. This to me is a strong reflection that their **Mental Clock Rates** are higher than those of the others. I would venture that Fischer played (in a simultaneous) at least one and a half times as fast as the others, including former World Champion Boris Spassky. Again, it's important to say that there were only a few grandmasters that I did play against, so this statement does not have any general significance. For example, I sadly never took the opportunity to see or play against the late Mikhail Tal, a former World Champion, in a simultaneous exhibition.

To put the previous narrative in perspective, I think that **Mental Clock Rate** is a powerful factor in *Strength*. On the other side of the coin, with a **Mental Clock Rate** substantially less than Fischer's (in my opinion), Boris Spassky nevertheless became World Champion. **Mental Clock Rate** is important, but certainly not the "total truth."

2. Memory.

The advantage of a good memory hardly needs elaboration. If you have a good memory, you're more likely to recall a similar position in a game, and possibly the continuation, than a player with an average memory. You're more likely to remember certain opening motifs, as well as specific moves. I

haven't dealt seriously with memory and its possible improvement. Some ideas are offered in Part III. Particularly, we'll learn how Flash Cards are tied in to this subject.

F. The composite evaluation of *Strength*.

Imagine that a set of tests was devised which would allow you to partition your game. You would have a rating, or "component strength," for each of the five major components. We know there is a certain overlap between components, but that doesn't invalidate the idea to be presented.

The important upshot is simply this: your overall rating, your overall *Strength*, is more closely linked to the weakest of these components than to the average of them, like the notion that a chain is only as strong as its weakest link.

To a large degree, this concept parallels the adage that "the winner is the player who didn't make the last mistake," or that chess games are lost and not won.

Let's quantify somewhat this concept of composite *Strength*. In Figure 19, we have arbitrarily divided the horizontal space into five segments, one for each of the five components of *Strength*. We've assigned them identical weighting, in the form of horizontal distance, since I believe they're approximately equal in impact on *Strength*. "A" is the level, or rating, of the weakest of the five components, and "B" is the average. Here, the average means the same as if one had the scores for five bowling games, so one simply adds them up and divides by five. "C" is my idea of the composite rating, and is equal to the lowest level "A" plus one third of the difference between "B" and "A."

The composite *Strength* shown in Figure 19 is my theoretical evaluation, and has not been subjected to any rigid scientific tests. It is quite possible that the true value of "C" might be closer to a quarter, or possibly a half (instead of a third), of the difference between "B" and

"A" above the floor "A," but I feel strongly that this composite "C" is considerably lower than the average "B."

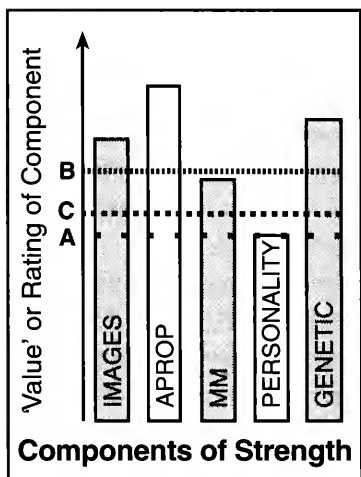


Figure 19

the composite one point for every 15 points (15 points' improvement in one component will improve the average by three points, and improving the average by three points will, in turn, change the composite by one point based on our model).

We'll return to this topic in Part III, where we'll talk about taking advantage of this phenomenon to improve your game.

CHAPTER TWO

CHESS INPUTS AND THEIR FILTERING

This chapter and the next shed more light on the three main blocks in Figure 2, namely chess inputs, the filtering of chess inputs, and a model of chess strength.

A. Chess inputs.

This section deals with the typical activities pursued by chessplayers to improve their game. We'll group chess experience into three categories: playing, studying, and other experience.

1. Playing chess.

We'll consider any "direct contact" chess as playing. So playing can be rated or unrated, with or without a clock (at any time limit), against a human opponent or a program (some call this playing against a computer). Playing Solitaire, a form of a simulated chess game described earlier, I *do* consider as playing.

Playing chess will almost certainly impact positively the first three components of chess capability — *Images*, **APROP**, and **Move selection Method**. It will therefore impact *Strength*. It is one of the key methods advocated by strong players toward better chess.

The effect of playing on *Strength* will be taken up in Chapter 4, where we'll model *Strength*.

2. Studying.

No one would quarrel with the assertion that, all other things being equal, the person who studies more will become the stronger chessplayer.

Let us define study as all focused chess activity other than playing a game. A discussion of the game just completed — a postmortem — is studying. Of course, reading and working through a text is studying.

Going leisurely over a grandmaster game is studying. Reviewing one's own recent game is studying. To me, even discussing some philosophical points with another chessplayer is a form of study, as long as it's focused.

So studying can take various forms. By studying, you may increase the number of your *Images* and thereby become stronger, or you may study combinations and improve your **APROP** and **Move selection Method**. Or you may learn to improve your **Move selection Method** by other techniques, such as studying middlegame texts, the *Informant*, opening pamphlets, methods of defense, and so on. Getting lessons from a stronger player is very effective, if you can afford these lessons.

We'll establish in Part III that study, or, more specifically, the most efficient or optimal study, is a key factor in improving or maintaining *Strength*.

While you're reading this, you may be wondering if studying can result in various levels of improvement depending on how it is directed. The next chapter, on modeling chess strength, will deal with this question.

Generally, a certain level of study, measured in hours per week, will result in an improvement in *Strength* of some amount.

3. Other *inputs*.

Many mental activities that we engage in do indirectly affect our chess *Strength*. When we balance our checkbook, particularly if we do it without a calculator, we are sharpening our mental faculties. When we do things that require thought, that require organization, that require logic, whether we are trying to solve a problem in day-to-day affairs, or even writing a letter or drafting a presentation, we are sharpening our mental processes, which will enhance, at least slightly, the **Move selection Method**.

As we'll discuss in our model in the next chapter, these other *inputs* have a far less intense, or immediate, impact than the direct *inputs* — playing and studying.

B. Filtering chess *inputs*.

Referring again to Figure 2, we see that chess *inputs* are filtered before they are incorporated into our body of chess *Strength*. If someone mentions the capital of a state that you had forgotten, you may choose to try to remember this fact. In the event that you don't intend to remember it, you probably will not. And so it is in chess. *Attitude* is a factor in this filtering process.

1. Attitude factors.

Here, very similar considerations are in effect as were in the previous chapter on chess *Strength*. Objectivity, physical fitness, and personality influences operate as filters, as well as being indirect Components of Chess Capability. The other attitude factors, time management and on-line toughness, are not really pertinent as filters to chess *inputs*.

2. Genetic factors.

Mental clock rate and memory are, again, factors that facilitate or hinder the rapid acquisition of knowledge from chess *inputs*. For a description of these, please refer to the previous chapter.

CHAPTER THREE

A MODEL OF CHESS STRENGTH

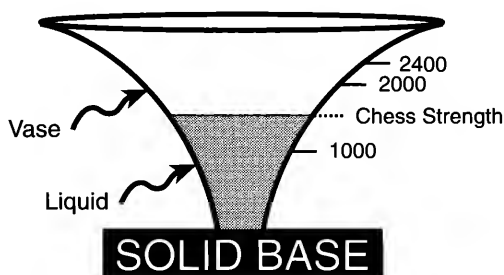
A. Basic structure.

1. The liquid for the vase.

There is a relatively simple model which should help us gain a perspective as to how some of the Components of Chess Capability interact.

Visualize a large vase made of glass, narrow at the bottom, that gets wider as you go up, widening more rapidly than an ice cream cone. The vase has liquid in it, up to some level but not full, with a scale on one side, as you'd find on a measuring cup.

You've probably already guessed that the level of the liquid in the vase is a measure of *Strength*. See Figure 20.



Model for Chess Strength

Fig. 20

Let's say you're playing a chess game at 40 moves per hour. You are entitled to pour a unit of this

special liquid (think of it as the *amount* in a coffee “creamer” served in a restaurant) into the vase for every hour your game lasts. We’ll base things on a 1600 rating, where, typically, a game with this type of time limit will last an hour and a half, entitling you to add one and a half units of liquid into the vase.

Now, what is the liquid? Imagine that the liquid is a prepared mixture, some of which is a heavy liquid, and the rest a light liquid, where the two ingredients of the mixture always stay mixed. The light liquid has the property that approximately half of it evaporates within two months. So, after four months, if no new liquid were added, only half of a half, or one quarter, of this liquid would be left. The heavy liquid behaves similarly, except that it takes ten years for half of it to evaporate.

For the light liquid, 8 percent of whatever amount of it exists at the moment evaporates in a week. For the heavy liquid, one 750th, or $1/750$, of it evaporates in a week. Calculations are given in Appendix IV, should you be interested.

It might be helpful to think of the light liquid as alcohol and the heavy liquid as water. Even though we know that more than half the alcohol is going to evaporate within two months, and that more than half of the water is going to evaporate in ten years, we can pretend that these liquids evaporate the way we just described.

One hour of serious play at 40 moves per hour is worth one unit of liquid, whereas one hour of diligent study is worth two units.

The assertion above reflects the view that, hour for hour, studying does more to improve our chess than playing, as long as some serious playing is kept as part of the player’s regimen.

Our typical player, rated 1600, will play one game

at 40 moves/hour every other week. He will also study half an hour a week, and he will absorb, through one method or another, the equivalent of another half hour of study just by exposure to the world — by thinking about chess, even by balancing his check-book — for this keeps his logical and arithmetic abilities exercised by exposure and interaction with other people, and so on. This typical player, then, gets to add 2.75 units of liquid to his vase every week. The development of this number is also given in Appendix IV.

It is worth noting that almost all of the liquid earned for the week, namely 98 percent, is light liquid.

2. Features of the vase.

In the previous segment, we introduced the concept of a vase with a scale on its side, and a level of liquid corresponding to *Strength*. The vase is always flanged in such a way that an amount of liquid equal to the liquid already in the vase must be added to increase *Strength* by 100 rating points.

Now, an interesting feature about the vase is that every chessplayer's vase is slightly different, even though everyone's vase possesses the feature of the previous paragraph. A gifted player would have a vase thinner than the average, so that a given amount of liquid would correspond to a higher rating than his neighbor has.

But a person is not necessarily stuck with a particular vase all his life. Changes in attitude, and, perhaps, some of the suggestions in this book may help change the shape of the vase. We'll see that, for any given vase, progress significantly beyond 100 rating points is difficult to accomplish. We are stuck with the "vase we're born with" unless we explore

not just new openings and tactical tricks, but new ways of looking at the game, where some of these ways are pointed out in Part III.

B. The rust factor.

When someone hasn't played for a while and feels rusty, he has forgotten some knowledge. He's lost some *Images*.

Let's review two types of *Images*, which will correlate to the two different evaporation rates already discussed.

There are durable *Images* and light *Images*.

Examples of durable *Images* in your everyday life are such things as the year of your birth, the fact that 6×7 is 42, and so forth. They are durable because they have been repeatedly reinforced. So they stick to the ribs. In chess, examples of durable *Images* might be "how the pieces move" — this one is reinforced every game you play, every move you make; as a matter of fact, it's reinforced with every thought about any chess position. Should you live to be 400 years old without ever seeing another chessboard, you would remember how the pieces move 350 years from now. Another might be the winning procedure of King-and-pawn vs. lone King, where you have repeatedly seen this or explained it to someone. Another might be the idea $Nc7+$, forking King and Rook (where King is at e8 and Rook at a8). Again, you have seen this, and thought of it, repeatedly.

There is another important category, quality *Images*, in chess (as in day-to-day life), where a fact or procedure is linked logically to other things you know. In the French Defense, for example, after $1. e4$ $e6$ $2. d4$, the move $2... d5$ is probably a quality *Image* for you because you know that a major reason behind $1... e6$ is to support the planned contest in the center

with 2... d5.

Now for light *Images*. The moves you memorize in an opening manual (without going back over them occasionally), or a complicated endgame maneuver that someone executed and is now showing you, are likely examples of light *Images* — things you are likely to forget, unless they are reinforced.

In our model, the evaporation of the two different liquids reflects this process.

What happens if the player with the 1600 *Strength* just stops his chess activity? He stops playing, and stops studying. Eventually, after many years (a quarter- to a half-century), he will stabilize at a rating strength in the vicinity of 1415. For the reader interested in the details, Appendix IV develops this rating, as well as constructing a “rating track” for this player.

Unfortunately, forgetting things is part of the human condition. In Part III we’ll see that there are ways to slow this process down. Accomplishing this is as useful for *Strength* as adding a certain number of units of liquid, or knowledge, into the vase every week, since total knowledge is the difference between everything learned and everything forgotten.

C. The effect of additional games.

Let’s use the typical player from the last section for our discussion. He’s played a number of years, reached a certain *Strength* plateau (and therewith a certain rating), and plays one serious game every other week in a club. It is, in my view, unimportant whether that game is rated or not. Let’s say the game is at 40 moves per hour.

According to our model of Figure 20, there is liquid to a certain level in the vase, corresponding to his *Strength*. Each time he plays, one unit of liquid is

added into the vase for each hour of play (for this player rated 1600), and we've learned that a total of 2.75 units is added weekly. The liquid is evaporating (both the light and the heavy liquid) at such a rate that the 2.75 units of liquid each week — earned as described in Section B — just replenishes the amount of evaporated liquid for that week. We have reached, technically speaking, the steady-state, or equilibrium.

It is important to note that, even if our chess-player is adding 2.75 units of liquid each week to the vase, the level of the liquid will eventually stabilize. The only way it can rise further is if we can add *more than 2.75 units per week*.

Now let's say he gets more interested and starts to play in two different clubs, one game every other Tuesday evening (his original schedule of a game every other week) and one game each week on Friday evening at a different club.

The player rated 1600, increasing his chess exposure from half a game a week to one and a half games a week, will eventually obtain a 63-rating-point increase. Here again, the calculations are provided in Appendix IV for the interested reader.

D. Effect of a tournament.

As far as our model is concerned, a tournament is equivalent to several individual games. If a player rated at 1600 plays a four-game tournament in one day, he is entitled to add six units of liquid to the vase (4 games x 1.5 hours/game x 1 unit/hour).

If you play in a tournament — say it's the four-day World Open — your chess awareness increases. The pieces and board become clearer, you can see combinations better, the sluggishness in analyzing a variation disappears, and your senses become sharpened. This improvement is best described by the

German *fingerspitzengefuehl*, translated somewhat clumsily into “awareness at the fingertips.”

On the dark side, you will probably agree that this chess awareness recedes again in the weeks and months following the tournament. You can now understand the model with the two types of liquids. Most of the value of the game, or tournament, is light liquid — our model uses 98 percent, evaporating quickly. Of this major portion, half is gone in two months, three quarters within four months, and all but about one sixty-fourth ($.5 \times .5 \times .5 \times .5 \times .5 \times .5$) has evaporated within a year. These figures, of course, vary from person to person and are my own estimates. This *fingerspitzengefuehl* is the “Chinese dinner” part of the tournament, the part that doesn’t stick to the ribs.

In each game, regardless of whether it’s part of a tournament, some “heavy stuff” sticks to the ribs. If you’re unfortunate, nothing new really strikes you; on the other hand, you may lose that game, and, in a postmortem, find out that you succumbed unnecessarily to some weakening pawn moves. If you make it a point to remember this, then this newly acquired knowledge becomes the new “heavy liquid” portion of the unit of liquid added to the vase.

At the 1600-rating level, or the crossover from class C to class B, *Strength* increases about two rating points per hour of play in a serious tournament (one hour of play is one unit on a base of 75 units of liquid, or an increase of liquid of 1.33 percent, corresponding to a 1.9-point rating increase in *Strength*). In a four-game, one-day tournament with an average

To be somewhat specific, let’s define a unit of liquid as the amount in a coffee creamer served in a restaurant. For a player rated 1600, the level in the vase corresponds to 75 units of liquid.

participation of one and a half hours per game (for a 40-moves-per-hour time control), or a total of six hours of play, this B/C player's *Strength* will increase by about 11 points.

One final point. During a tournament, all players benefit from the heavy chess engagement. All will have increased chess awareness and strength, just as a rising tide raises the level of all boats in the harbor. So this increased strength will not, on average, work to any player's advantage, as far as rating points are concerned, during the tournament. But after the tournament, say the following week, the player who participated in the tournament will have a benefit relative to his club members.

E. Effect of additional studying.

Studying will increase various *Strength* ingredients. It will increase the number of *Images*, because we'll assimilate new ideas, new motifs. It will improve **APROP**, because we normally absorb at least some of the analysis given in the chess material we're looking at.

Most studying develops short-duration *Images*, corresponding to the light liquid in our model, while a small percentage of the *Images* becomes long-duration *Images*, corresponding to the heavy liquid in our model.

From our model, we can determine that increasing play by one game a week (again, for a player rated 1600) will result eventually in about a 63 point rating improvement. It should not escape our attention that no one activity, or method, or idea, can result in an annual improvement, year after year. Any one of these things can generate a rating improvement, but there is always a limit.

A player who has plateaued at a *Strength* of 1600

after some years of playing and studying, and then starts to study diligently an additional hour and a half per week while maintaining his playing schedule, will eventually reach a *Strength* of 1700.

By our model, this additional studying of an hour and a half per week represents an additional three units of liquid, therefore roughly doubling the total chess *input* for this 1600-rated player.

The studying will develop a certain number of new *Images*, plus a slight improvement in **APROP** each week. Eventually, say a year or two later, the increase in *Images* and **APROP** will have accumulated to such a degree that the total evaporation of the liquid, or “forgetting process” in one week, will equal the new material gained by study during each week. His *Strength*, then, will level off at the new level of 1700 (we have explained earlier that changing the total weekly chess *input* into the vase from 2.75 units to 5.75 — approximately doubling it — would eventually represent an approximate doubling in knowledge, comparable to an increase of 100 rating points). It is important to note that these allegations are for typical players. There are exceptions, to be sure.

For this same player to reach 1800 by studying, he has to study three times as much. For a 200-rating-point increase, the total weekly *input* has to quadruple, from 2.75 to 11 units a week. He must therefore study *four additional hours* ($11 - 2.75$ with the difference of 8.25 divided by two units per hour of study) to achieve this goal. For him to eventually reach 2000, the total weekly chess *input* has to be 44 units, corresponding approximately to 21 hours of study a week, in addition to the normal regimen of playing “half a game a week,” and a half hour of study a week. His *Strength* is always trying to settle back to 1600. If you think of our model as having 75 units of

liquid at 1600, it would have 150 units for a *Strength* of 1700, 300 units for a *Strength* of 1800, 600 units for a *Strength* of 1900, and so on.

The table below shows the impact of studying on *Strength*.

Additional study time beyond "normal study during baseline period" for player with 1600 <i>Strength</i> .	Eventual <i>Strength</i> relative to "baseline <i>Strength</i> ."
1.75 hours per week	+100 points
5.3 hours per week	+200 points
12 hours per week	+300 points
26 hours per week	+400 points

IMPACT OF STUDYING ON STRENGTH

The table is not a rigid, infallible evaluation of studying. It is my idea of the median improvement of a large number of players. The actual improvement in *Strength* that a player will achieve depends on the type of material he is studying, the seriousness of the study, and many other factors. We'll return to this in Part III.

There are several important features about the table. First, imagine that a player starts playing chess, and plays on and off for some number of years at some level of study. He typically reaches a level, or plateau. It is this plateau that is meant as a reference in the table. This is also the plateau that Grandmaster Andy Soltis refers to as your final plateau after about eight years of serious play in his article in *Chess Life*, January 1986.

Second, notice in the table that the typical player must increase his study time *geometrically* for each increment in rating strength.

For every 100 points, the typical player must

increase his study time by about a factor of two. Here again, the correct number might be one and three-quarter times as much study for each 100 points, or possibly two and a half times as much. But the geometric increase is the rule rather than the exception. The average player simply will not improve an additional 100 points for every additional three hours of study per week, or even five hours per week.

This is the “law of diminishing returns” at work.

And here is the essence of this book. As a typical player, you very likely will be held to the table above. But if you absorb and put into practice the ideas in this book, you will do better than the table!

The third point is that once you are studying at some level, and your *Strength* has increased accordingly, you must continue studying, but at a level less than you were studying to reach your elevated *Strength*, to maintain your new *Strength*. If you stop studying, your *Strength* will eventually drift back near the original plateau, although that may take some number of years.

PART THREE

IMPROVING YOUR CHESS STRENGTH

If experience were the true road to wisdom, then the stones at Piccadilly Circus would be the oracles of the modern world.

English quotation

The quote above tells us that people who have really had something to say — Shakespeare, Lincoln, Gandhi, and others, of course — have sorted out their experience, sifted the wheat from the chaff, and hammered it into a coherent framework, so that this framework became the true distilled wisdom — thus making them the oracles of the modern world. Anyone can have experience; and the stones at Piccadilly Circus, having the greatest experience by having been trod upon for centuries — but without the distillation — have really no wisdom, even if they “could talk.”

And so it is with chess. Thousands of games are of no avail if we don’t distill this experience.

Showing you how to get the most benefit, the biggest boost to your *Strength* per hour of study or play, is what Part III is all about.

The biggest bang for the buck.

We’ll learn about *Images*.

We’ll establish the most fertile ground for durable *Images*.

We’ll learn how to improve **APROP** — the Ability to PROject Positions — and we’ll learn about becoming aware of **APROP**, and that there are struc-

tured ways of improving it.

We'll learn about improving our **Move selection Method**, which is a heavy contributor to *Strength*.

We'll learn about the considerable influence that *Attitude* has on *Strength*, and how to recognize these influences, and what to do about them.

We'll learn how to improve using these concepts rather than some specific process dealing with the openings, the middle game, and the endgame.

If you are among the chessplayers with a time pressure problem, you are really in luck if you give the method in this book a fair shake. By the way, I believe this method is the only one that really works, with all due respect to former World Champion Mikhail Botvinnik, as well as others, who advocate different approaches. Proper time management, and therefore the avoidance of time pressure, is part of *Attitude*, as explained in Part II.

I have heard senior masters advise people that if they want to become better, they must play more. I can't visualize anyone disagreeing with the general statement that playing more will improve one's game. If one learns the least little bit from playing, then he's going to improve. To me, there is no information and no value in that statement.

The real issue, and one we'll address, is: If we're going to spend any time on the game, be it

one, ten, or even 50 hours a week, how should we employ it to most improve our *Strength*?

One thing learned in Chapter 1 is that an im-



Botvinnik

provement in the weakest of the five major components of chess *Strength* carries a far greater value in improving our composite *Strength* than improving any of the others. If you are fortunate enough to know which is your weakest, you would be well advised to work on that component, even though it probably is the least palatable.

Let's get on with it, with getting to the heart of improving your game.

CHAPTER FOUR

INCREASING THE NUMBER OF IMAGES

If we could learn from history, what lessons it might teach us! But passion and party blind our eyes, and the light which experience gives is a lantern on the stern, which shines only on the waves behind us.

Samuel Taylor Coleridge

Have you ever lost two games the same way?

For a period of about 15 years I played Blitz Chess with a talented but relatively untrained player. We averaged, during our lunch hours and after work, ten games a week for over 7,000 games.

Since my opponent very rarely took time to analyze these short games, he could learn only from his cross-board exposure. It turned out he undervalued “wild pigs” on the seventh rank — the two Rooks connected on the seventh, the rank of the opponent’s pawns.

Now, he recognized that wild pigs were strong, but insufficiently so. I would obtain “wild pigs” more often than I deserved, and he, on the other side, occasionally chose other, less strong continuations when he should have pressed to get “wild pigs.”

Over the years, I must have won many games in this manner — maybe only about one percent of all the games I won; but the point is that with all the additional games he lost, he never caught on. A subtle point, even when repeated, can elude an intelligent person for decades.

The method to be described is designed to find

and capture new ideas such as this, so that years, or possibly decades, do not have to go by before one stumbles on them.

In Part II, we established that *Images* is short for “the group of all rapidly accessible mental chess pictures” that one possesses. A logical extension of this description is the idea that *Images* are actually the remainder of a subtraction process.

“Images” is the group of all useful chess concepts and pictures learned since birth, minus all the ones forgotten, with the remainder now rapidly accessible.

Let’s recall the notion of “quality *Images*,” which are *Images* linked logically to something else. An example is the procedure for winning King-and-pawn vs. lone King when you have the opposition. It’s a quality *Image* because it is logical and consistent.

We talked about a model, a vase with a mixture of liquid in it, where the level of the liquid is your *Strength*. Each time you play a game, or learn something, liquid gets mentally added, raising the level, while the process of forgetting manifests itself as the evaporation of liquid.

We can increase *Images* in one of two ways, and better yet, by doing both things. We can learn new motifs, and we can work at retarding, or slowing, the process of forgetting the things we already know. We can maximize our increase in *Images* **in the long run** by learning as many new *Images* as possible, with as high a fraction of these being quality *Images* as possible. Then, the objective is to turn as many of the *Images* learned into durable *Images* as possible. We’ll describe the “conversion process” of turning light *images* into durable *Images* shortly.

In this chapter we’ll establish that the best source of *Images* is our own games, be they cross-board games, postal games, or the test method of Solitaire.

It may be hard to believe, but each of your games is a hidden treasure, and finding a new motif is like finding a jewel in this hidden treasure.

We'll talk about Flash Cards, what they are, how they are constructed, and that they are vehicles for capturing these motifs, these jewels, forever. We'll talk about the periodic review of these cards as our method for slowing the rate of evaporation, slowing the process of forgetting.

A. Getting new ideas.

A new idea is one you run across where you say to yourself, "Wow — I didn't realize *that!*" It almost has to jar you.

You will discover new ideas from your move selections under test — in tournament games, in club games, in postal games, in Solitaire Chess, and in your study of problems — when you examine them critically *afterwards*. You will also discover new ideas when you go through tutorial material such as an endgame book, or an opening book.

1. Studying your own games.

Let's explore where we would get some new ideas. We'll assume you recently played a tournament game at a relatively slow time limit. Presumably you made move selections thoughtfully during the game, based of course on your knowledge of opening theory, and so on. Later, you analyze the game. A chess buddy, or better yet, a stronger player, perhaps a master, looks at the game with you, and questions some of your moves, and finds one where he feels you should have made a totally different move based on an entirely different idea. You stop and analyze the position, and become convinced that he is right. You say to your-

self “**I never thought of that!**”

That is an example of a new idea. No one is suggesting that you just cave in to the stronger player’s suggestion, but that you convince yourself of it, maybe right there — in real time, or off-line, at home.

An example of this is Figure 21, Wetzell–Allan Bennett, Westford MA, 1987. White had been on the attack when Black played **26... Qg6-h5**, reaching the diagrammed position, offering the exchange of Queens. I reasoned that I was on the attack, and no way was I going to let my attack be broken with the exchange of Queens.

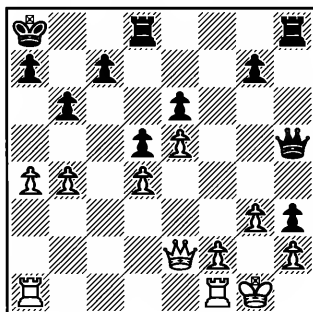


Figure 21–White to move

I played **27. f3**, pressing on with the attack, and rapidly got into trouble after some weak moves: **27... Rhf8 28. b5 Rd7 29. a5 R7f7 30. Ra3 g5 31. ab cb 32. Qd3 Qh7 33. Qc3 Rc7 34. Qb4 R8c8 35. Ra2 Qd3 36. Rd2 Qe3†**, and I resigned shortly.

In our postmortem, my opponent, Allan Bennett, a master and higher-rated player than I, pointed out that I should have considered exchanging Queens on my 27th move because of my very considerable endgame advantage. I hadn’t thought of that. My attack had forced him on the defensive, and upon his offering the exchange of Queens, I should have con-

sidered this exchange, with the idea of taking a different tack of infiltration with the Rooks.

Recent further analysis by another master concludes that White's exchange of Queens, 27. *Qxh5*, is a good move, but less clear a winning plan than we thought during the postmortem, and probably inferior to 27. *f3*, when this pawn move is used with the correct follow-up. However, the real issue here is not whether 27. *Qxh5* is the best move, but the fact that I didn't even consider it. ***I never looked at 27. Qxh5!***

After 27. *Qxh5 Rxh5*, play might have continued 28. *Rac1 Kb7* 29. *b5*, forestalling Black's ...*c5*. White will eventually play *f3* (with the idea of *Kf2*, *g4*, and *Kg3*, artificially isolating, and then attacking, Black's h-pawn). White will probably win the h-pawn, when accurate play will give him good winning chances.

The new idea was that one must constantly be on the lookout to convert a dynamic advantage — the initiative of the attack, for example — to a permanent advantage. Here the superior pawn structure becomes more important in the endgame than it was in the middlegame with Queens still on the board.

One must constantly be on the lookout to convert a dynamic advantage . . . to a permanent advantage.

Did I know that before the game? Yes, I did. Was it an *Image*? Apparently not, since that thought did not rise to a conscious level as a useful resource during the game.

So now I had a new *Image*.

We have already introduced the idea of quality *Images* being logically linked with something else you already know.

So this new *Image* is a quality *Image* because its essence, namely that one should always be on the lookout to convert a dynamic advantage into a per-

manent advantage, is a logical idea.

One more thing about quality *Images*. Quality *Image* refers to a logical context, and has nothing

A quality *Image* becomes a durable *Image* with repeated application.

intrinsic to do with being either durable or light (short-lived). A new quality *Image* becomes a durable *Image* with repeated application.

Normally, since quality *Images* are logical ideas, they are easier to retain, less likely to be forgotten. They need “less revisiting” to stay as *Images*. We’ll address shortly the notion of converting the new quality *Image* into a durable *Image*.

Studying our own games is a catch-all description for the critical review of any chess activity in which we are under test. Rated cross-board games or tournament games immediately come to mind. The postal game, any quiz such as Larry Evans’s *What’s the Best Move?* (currently out of print), the nine-diagram quiz near the beginning of each *Chess Life* magazine, the study of the combination positions in each *Informant*, as well as Solitaire Chess, all fall under this category.

a. Why study your own games?

I feel strongly that studying your own games is the most worthwhile way to spend “the first half of your study time,” with the intention of finding key flaws.

Here’s why: a flaw in reasoning, or a personality quirk, or the reason behind a blunder in a game, when properly identified and assimilated, is a quality *Image*, worth several typical *Images* that you pick up by studying a text or opening manual.

Think of it this way: if two players are alike in all

respects, where one plays only rated games and does no studying, while the other plays a similar number of rated games each month but studies his games, the first player would take about five to seven times as long to improve the same increment in *Strength*.

Let's examine this claim.

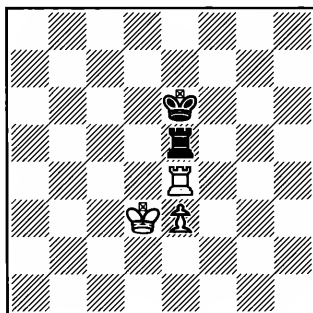


Figure 22—White to move

Say I'm White on the move in Figure 22. For the sake of discussion, I don't know how to win King-and-pawn vs. lone King, and I'm not familiar with the opposition. I know that being a pawn up in a King-and-pawn ending is a big advantage, and I also know that with a pair of Rooks on the board, and particularly with pawns on only one side, the game can become very complicated.

So I play 1. **Rxe5**, realizing the fruits of the last two points made. But after 1... **Kxe5**, Black draws, because White doesn't have the opposition. Play might continue 2. *e4* (White cannot improve his position with any King moves) *Ke6* 3. *Kd4* *Kd6* 4. *e5†* *Ke6* 5. *Ke4* *Ke7* 6. *Kf5* *Kf7* 7. *e6†* *Ke7* 8. *Ke5* *Ke8* 9. *Kd6* *Kd8* 10. *e7†* *Ke8* and White must either abandon the pawn or stalemate Black with *Ke6*.

Let's now imagine that I understood the principle of the opposition, and knew how to play the King and pawn-vs.-lone King ending. I would realize

that the game would be drawn if I played 1. **Rxe5**. So, before giving up the draw, I should search for a continuation that might result in a win. I would probably find 1. **Kd4**, after which Black must play 1... **Rxe4**, since any other move would lose the Rook. Now 2. **Kxe4** secures the opposition for White, and he can win. Play might continue 2... **Kd6** 3. **Kf5** **Ke7** (if 3... **Kd7**, then 4. **Kf6**) 4. **Ke5** **Kd7** 5. **Kf6** **Ke8** 6. **Ke6** **Kd8** 7. **e4** **Ke8** 8. **e5** **Kd8** 9. **Kf7** and Black queens the pawn and wins.

The points are these: the determination of the result of a King-and-pawn ending without prior knowledge is very difficult to develop over the board; in this case, the lack of knowledge resulted in a draw where a win was possible — therefore giving up half a point unnecessarily; but most of all, this lack of knowledge is like a soft underbelly, an Achilles heel, which will be exploited against me time and again.

This lack of knowledge will cost me half a point maybe once each 50 games, corresponding to seven rating points. This arithmetic comes about most simply with an example. The 50th game of a hypothetical match should be a win for me based on this won King-and-pawn ending, which, if I won, would now give me a score of 25, just matching my equal-strength opponent. But, since I don't understand this endgame, I draw this 50th game for a total score of 24.5, or 49 percent. I would presumably repeat this performance match after match, each time scoring 49 percent instead of 50 percent, which will ultimately give me a rating seven points below my opponent's.

I might now reply: "Big deal! If I don't recognize this, it costs me seven rating points. I will eventually learn it after it happens half a dozen times, even without study."

Think about this: where else can I earn seven permanent rating points as easily as learning a King and pawn-versus-lone King ending? Yes, I will pick this up by osmosis, after being exposed to it a number of times, but probably more than seven. Therefore I need to play about half a dozen games-to-one for a player who studies his games and finds the flaws, such as this hole in my knowledge about King and pawn-vs.-lone King.

You might now ask the question: since one rating class is 200 points, or the equivalent of winning consistently about three out of four games (the actual expected winning percentage is 76), why not just write down 30 quality *Images*, which, if you master, will improve your strength by 30

By studying your games critically, without any other studying, your annual improvement in Strength will be several times greater than if you just picked up your pieces, without “looking” at the game.

Images times seven rating points each, for a total of about 200 rating points?

The difficulty with this plan is that you need to find 30 *Images*, which, when mastered, will each save you half a point once every 50 games, or convert a draw into a win once every 50 games. But without carefully studying your own games, how will you know which *Images* will be the high-quality ones, the ones converting a draw to a win every 50 games?

But studying a text to absorb some number of *Images* which would be the equivalent of 30 quality *Images* is exactly the activity described under “studying other material,” which is good, but less productive than studying your own games, and should be done only if you are also spending time studying your own games.

2. Studying other material.

We'll now discuss all other chess activities.

Most common among these is studying an opening line in *Modern Chess Openings*, or the *Informant's Encyclopedia of Chess Openings*, or some pamphlet. You may be looking at a tutorial text, such as Kotov's *Think Like a Grandmaster*, Nimzovich's *My System*, Stean's *Simple Chess*, Hooper's *Practical Chess Endgames*, Capablanca's *Chess Fundamentals*, or Fine's *The Ideas Behind the Openings*.

Spend half your study time analyzing your own games. Identify and correct the faults. It's the most productive form of chess study.

These texts represent excellent resources for the area of their individual concentrations. The exclusion of any other work or book from this list is not meant negatively — rather that this list is a subset of books to which I have been exposed that I feel have benefited me most.

The character of this type of studying is that one gets exposed to new material at a much higher rate than can be assimilated in a way that is recallable — it's hard to turn into durable *Images*. They're really light *Images*.

In a way it is like reading a newspaper article, say about a flood somewhere. A year later, few people would remember the details about the flood — where it occurred, the level of water above normal, the extent of damage it caused, and so on. Some people wouldn't even remember reading the article, or the newspaper it was in.

But in chess it is precisely this level of detail that is important. In *Think Like a Grandmaster*, Kotov goes through a portion of a Botvinnik game, citing at one point the immense importance of controlling a

file. Incidentally, since even a beginner would recognize the importance of an open file, I would interpret Kotov's advice this way: an open file or diagonal is much more valuable than it would appear.

The shortcoming of the study method we're talking about in this section is that it tends to be like a Chinese dinner; it doesn't stick to the ribs. The new information transforms into light *Images* for a few weeks after your exposure. Then you lose it by forgetting it.

There's no magic advice on how to improve the results from the kind of studying we're talking about here, other than the usual: try to sift the important information, taking notes.

3. Making the commitment to quality study time.

Quality study time is the critical review, either working by yourself or with the help of another, preferably stronger, player, of your own games.

Earlier in the chapter, we developed the rationale for the high value of quality study time. You may say to yourself "Okay, that's probably right, and I'll try to remember that and spend a little more time analyzing my games."

That's a good step, but it's only a step. The problem is that quality study is painful, because you are exposing your own shortcomings, or, more effectively, someone else is doing this to help you.

Critically reviewing your own games is painful because you are exposing your own shortcomings.

If you should be fortunate enough to have a stronger player review your games with you, you could be receptive, and look with him for the weaknesses in your logic and your **Move selection Method**.

You could also resist every inference that you did something poorly and contest virtually every statement. I know people like that, where almost every assertion by the player reviewing his game for him has to be proven by a gut-wrenching demonstration over the board, often into the endgame. A player reacting this way, in a defensive manner, is not really

Don't resist every inference that you did something poorly—and don't contest every statement.

doing quality studying. His mind simply isn't open to search for his weaknesses.

But the real impetus to concentrate first on quality study time should come from its very high value when compared with other forms of studying. It's a little like getting paid five times as much per hour, with the higher-paying job maybe twice as hard. I don't think there's much question which job you'd take.

So you have to say to yourself: "Okay, I'll commit to some real quality studying, the 'bare my soul' type, open-minded search for my weaknesses."

a. The structure of "quality study time."

We've said that quality study time will probably be painful. You can really only do it at first for a limited time, maybe a quarter of an hour. So say to yourself: all right, that's a start. But it's not enough. It's not even enough for one game (one serious, rated or unrated game). I promise myself I'll study this game again, maybe tomorrow evening.

You'll find that your tolerance will build up slowly. You eventually can take more well-directed self-criticism, and you'll be able to stand more criticism from a well-intentioned friend or teacher.

Eventually you will get the discipline to critically analyze each serious game you play for one hour, or

better yet, two. You can be proud of yourself if you eventually settle on one hour of quality study time per serious game you play.

The reason we're going through this concept step by step is that most chessplayers don't do any significant high-quality studying, the major reason being its mental painfulness. It's a big turn-off. It requires a careful plan to prevail.

To shed a little light on just how difficult it is, let's look back at the candidates match between Spassky and Robert Byrne. Byrne was already, at that

Most chess players don't do significant high-quality studying because of its mental painfulness.

time, doing the chess column for the *New York Times*, and, during the beginning of his match with Spassky, reporting his own analyses of these games in the *Times* on the following day or so, similar to the way he covered the 1992 Fischer–Spassky match. He stopped before the match was over, however, since Spassky was so strongly dominating it.

On balance, it appears logical that grandmasters are more capable of quality study time than we common folk, since grandmasters are the cream of the chess-playing crop. And if Grandmaster Byrne had difficulty in continuing these gut-wrenching analyses of his own games, then you can be proud of your efforts along these lines.

B. Capturing new ideas.

Every new piece of information makes some impression on us. In our model from Part II we learned about durable *Images*, and light *Images*, which are short-lived.

We talked about durable *Images* usually being

the result of an *Image* which has been repeatedly reviewed, or revisited, making it less likely to be forgotten. Light *Images* are pieces of information that have not been repeatedly reviewed.

When people take notes, on anything — not necessarily on chess — it's really intended to convert a light *Image* into a durable *Image* by reinforcing it. Think of the notes one takes in class that get reviewed at home so that they stick to the “mental ribs” for the final exam.

Light Images are pieces of information that have not been repeatedly reviewed.

What we really want to do is take notes from a quality *Image*, and set it up in such a way that it is very easily reviewable — so that it can be glanced at in sev-

eral seconds — and rekindle the *Image* in your mind.

That is the reason for a Flash Card. We'll talk next about its construction.

1. Flash Cards.

a. Flash Card generation.

(i) *Introduction and overview.*

A Flash Card is a learning aid, a tool, to record an *Image*, hopefully a quality *Image*. It is a three-by-five-inch card with certain information on it that we will get to promptly.

It is important for us to have the understanding that the concepts identified are applicable to virtually all chessplayers, even though the specific examples chosen are mostly from my own experience, and should be only that — examples — to you. Adopting my specific examples into your repertoire of knowledge runs at cross-purposes to your best

interest.

In the next section, we'll identify the specific layout of the card. It must be organized in such a way that you can refresh your memory with its contents in a very short time, hopefully within, literally, a few seconds.

In Section *iv* we'll go through the development of several representative Flash Cards. Appendix III has some additional Flash Card developments, just to give you a better feel for these, and to help propel you to do your own.

(ii) *The layout of a Flash Card.*

A Flash Card utilizes as raw stock the blank side of a 3x5-inch index card. You can use the back sides of ruled cards, which are available anywhere. On it you stamp a chess diagram, and then enter a specific position. Directly below is a neatly written "grabber" phrase, maybe with a border around it. Beneath that may be some specific analysis. In the bottom left corner belongs the occasion, such as the game, tournament, or Solitaire game which was the source of this information. The bottom right-hand corner has the current month and year.

Now, how do we put a Flash Card together?

The card. As mentioned, this is simply a 3x5-inch index card. The card can be ruled or unruled. Since you will only use one side of the card, you

This author shows you how to make the special cards mentioned in this book. Information on securing pre-made blanks is available in the catalog at the end of this book.

might as well buy ruled cards (they're more available) and use the back side. Packages of assorted colors are also available. I find the variety in colors of the Flash Cards I've created uplifting, since it breaks up the monotony of a "single-color" collection.

The diagram. The US Chess Federation, at 186 Route 9W, New Windsor NY 12550, (914) 562-3555, sells a rubber-stamp chess diagram (stock number US-40) for about \$5. You would need, separately, an ink pad. The diagram is two and a half inches square, so it would fit on the 3x5 card.

The chess pieces. You need to construct chessmen on the cards. Several years ago, I developed a freehand way of constructing the different chess figures, which has evolved somewhat since then. Figure 23 shows you how to construct any of the chess pieces, white or black, with a single color pen (or pencil). You can draw a pawn, making a triangle, the first stroke being the same one most people use to start the number four, and the second stroke simply closing the triangle. For a black pawn, the triangle is filled in.

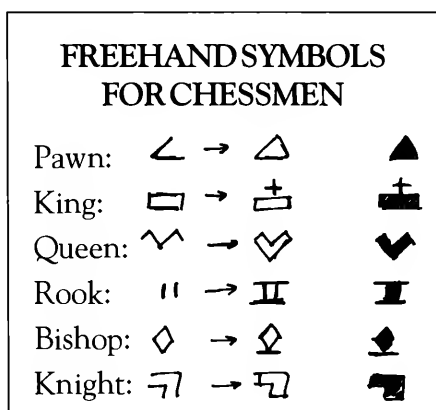


Figure 23

For a King, you simply draw a box and put a cross above it. Again, for the black King, you simply

blacken the box.

The Queen is somewhat tricky, but you'll be able to construct a Queen your mother would be proud of after only a few tries. Start by constructing a letter similar to an M. The left and right sides are slanted, and the middle point goes a little lower than that for a normal M. Then you add a letter V so as to enclose the figure. Again, for a black Queen, you simply fill in the figure as shown. The same figure also shows you how to make a Rook, a Bishop, and a Knight.

You'll be able to construct these figures after a few minutes of training. Making up a chess diagram has become so natural to me that I can now construct an entire position, with all 32 chessmen, in a minute and a half, without rushing. It is the simplest, most time-effective method for me. And the resulting position is very clear to me at a glance.

You can make the diagram more efficient by using two different-color pens to simulate the white and black pieces. You would not have to "fill in" the black pieces if you use a different color for Black. There are two minor drawbacks. First, you must carry two different-color pens with you. Second, should you need to photocopy your masterpieces, you may not get the contrast (between the white and black pieces) that you want.

If you don't like the forms of the chessmen presented here, feel free to invent your own. You may prefer round chess figures instead of square ones.

An alternative is to use computer-generated diagrams. Even though I'm not familiar with this method, I wanted you to be aware of this opportunity should you want to pursue it. Thinkers' Press, Inc. sells a chess font for use on the Macintosh. A similar font for the PC will be made available.

The grabber phrase. To facilitate quick review, this should be only a few words.

The analysis. There may be a specific analysis that relates to the diagram. The analysis is put on the card only for reference which you may occasionally want to review.

The left-hand bottom corner. You may like to go back someday to the position in the diagram. The information in this corner is simply a locator, usually of the game — your opponent, the month and the year. It is good if you keep a chess notebook of your games so that you can recover an older game if you'd like to.

Sometimes you generate a Flash Card as a result of your incorrect solution to a chess quiz, perhaps one of the nine diagrams in the quiz near the beginning of each issue of *Chess Life*. You can then simply refer to that diagram in the particular issue of *Chess Life*.

(iii) *Development of a typical Flash Card.*

The typical raw material going onto a Flash Card might be the study scenario we did under “own-game analysis.”

There (Figure 21) we established a fixation with the attack, when I should have *considered* trading Queens.

Now, how to turn this *Image* into a Flash Card?

We need a phrase or expression which will instantaneously trigger the recall of this scenario. Let's think of a couple. One might be: “Why not go into an endgame?” Another might be: “Convert to permanent advantage!” Here, White's permanent advantage is Black's backward c-pawn, as well as the artificially isolated h-pawn after White plays g4 (Black's h-pawn becomes hard to defend).

I feel that the second grabber phrase is more appropriate.

The Flash Card might look like Figure 24. For the rest of my life, within a few of seconds of looking at this card, I will recall this game, and the fact that I should have considered exchanging Queens, assuming that I look at this card occasionally, say at least twice a year.

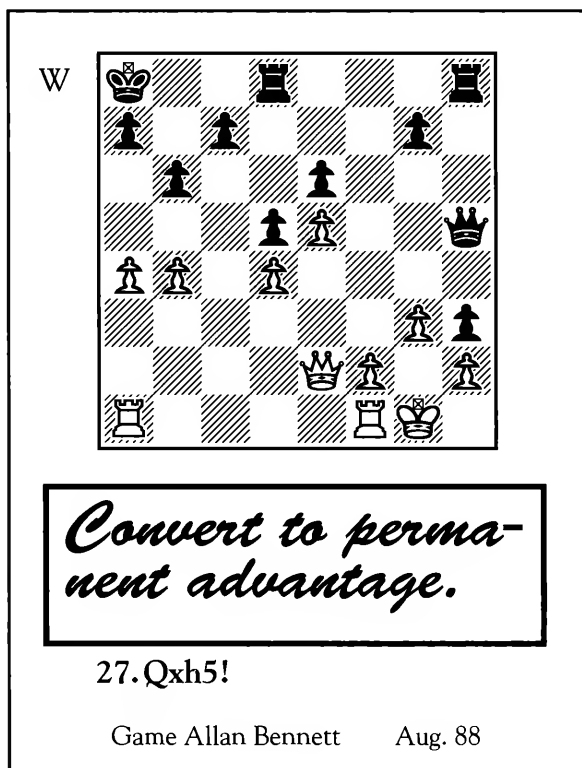


Figure 24

So we have taken the output of one of our own game analyses as the raw material for a Flash Card, constructing the Flash Card by adding an appropriate grabber phrase and chess position.

(iv) *Additional Flash Cards.*

Let's develop some additional Flash Cards, for

added familiarity, and then look at some others in Appendix III. Again, the Flash Cards we are going to discuss now are cards that I developed some time ago, after studying particular positions where I had made some blunder or error in judgment.

In Figure 25, I had not found the correct continuation to Problem #316 in Reinfeld's *1001 Winning Chess Sacrifices and Combinations* after a reasonable time. You may want to look at it briefly just for fun.

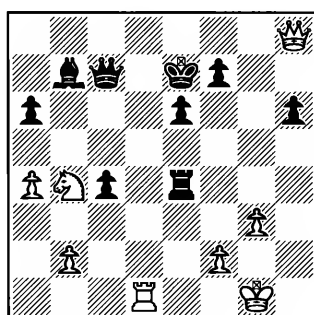


Figure 25—Black to move

Did you get it? The correct move for Black is 1... **Qd6!** The Queen attacks both Rook and Knight. But White cannot play 2. **Rxd6** because of the mating combination 2... **Re1†** 3. **Kh2 Rh1 mate**. Black is forking Rook and Knight with the Queen, and will therefore win one of them.

Why was it so hard for me to see this? Clearly, because 2. **Rxd6** looks like it would simply capture Black's Queen. But here the Rook is chained to the first rank, defending against the back-rank mate.

After thinking about this for a while, I came up with the idea that the Rook is crippled: it can't leave the first rank. So there's an idea for the grabber phrase. See Figure 26. From now on, every time I look at this diagram I'll be reminded that once in a

while one comes across a crippled piece, either one's own or one's opponent's, and that I should be aware of its weakness. I suppose that the standard description of the Rook's plight is "overloaded."

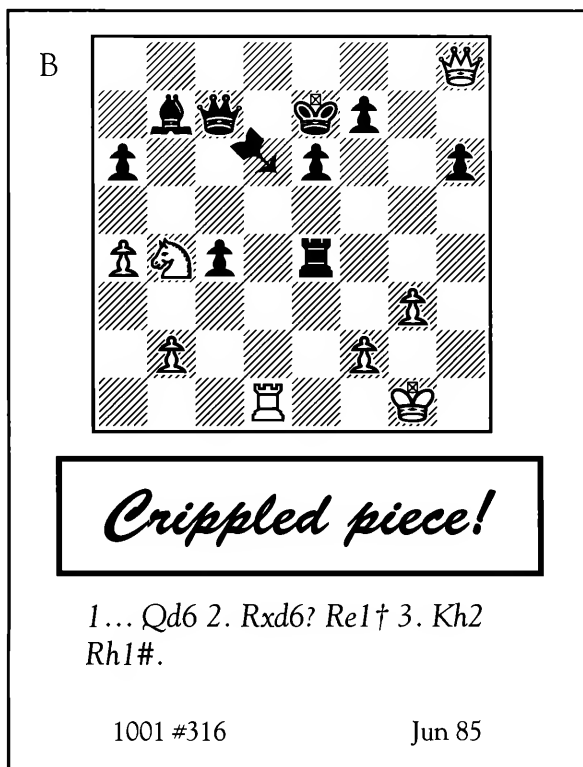


Figure 26

The “1001 #316” at the bottom left of Figure 26 is simply shorthand for *1001 Winning Chess Sacrifices and Combinations*, Problem 316. June 1985 is the month in which I did this exercise.

Figure 27 comes from the nine-diagram chess quiz in *Chess Life*, August 1989. In pondering this, I saw that Black could deflect White's Queen with the skewer $1 \dots Bb5$ 2. $Qxb5$, but I saw no worthwhile follow-up. After some deliberation, I finally settled

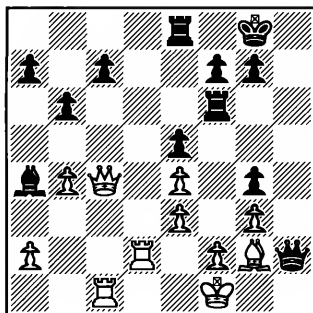


Figure 27—Black to move

on 1... Rc6, snaring White's Queen for Rook and Bishop with the forced follow-up 2. Qxc6 Bxc6 3. Rxc6, which still requires precise chess for Black to bring home the win. But it never occurred to me that after Black makes possible 2... Bb5 with a preparatory move, White cannot save his game with *either* a King or Queen move (needed to stop Black's pin). So 1... c6 is the move which unravels White's game. Now White must either move the King or the Queen or play 2. Re2 to stop the threatened skewer 2... Bb5. 2. Ke1 loses to 2... Bb5 and 3... Qg1†, and 2. Qc3 (2. Qa6 loses the Queen to 2... Bb5†) allows Black to win at least a Rook after 2... Bb5† 3. Re2 Bxe2†. 2. Re2 Bb5 3. Qc2 Bxe2† and Black wins the Exchange.

So why didn't I see the preparatory pawn move to c6? After deliberating about it for a while, I had this thought: normally, when we see a potential skewer, or maybe a fork, we think of the opportunity as fleeting. For example, if it takes you two moves to get the Knight to a position for a fork, your opponent can move one of the pieces out of the way, or maybe cover the forking square, stopping your Knight from executing the fork. As a result, we may (or at least I know I did) condition ourselves to not get our hopes up too much when we see a "fork in the future" or a

“skewer in the future.” We don’t pursue it, or we don’t pursue it sufficiently. This was a case in point. The correct plan sets up the skewer.

So the grabber phrase: “Skewer in the future.” See Figure 28. Again, whenever I see this Flash Card, I’ll think of this position; but more important, I’ll remember the idea.

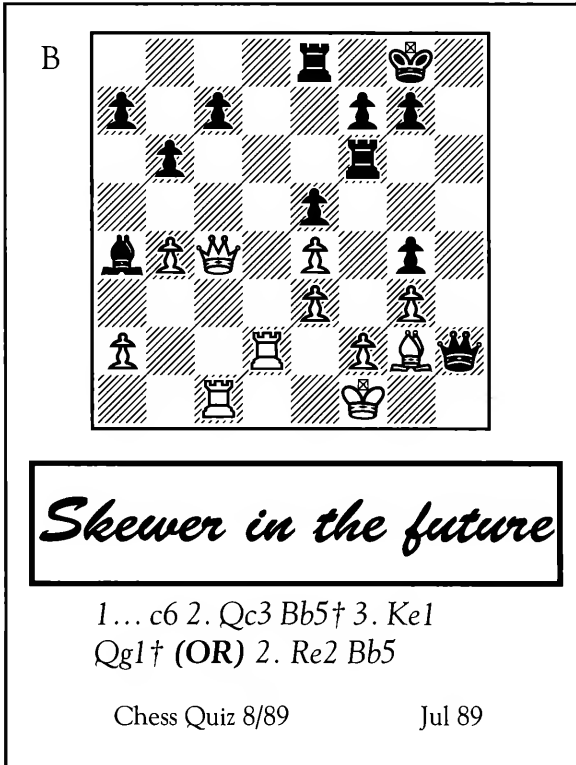


Figure 28

In Figure 29, I was emulating former World Champion Capablanca in the game Capablanca–Chajes, New York 1918, annotated in Capablanca’s excellent book *Chess Fundamentals*. Even though I was “playing” the white pieces, I was thinking about Black’s moves too!

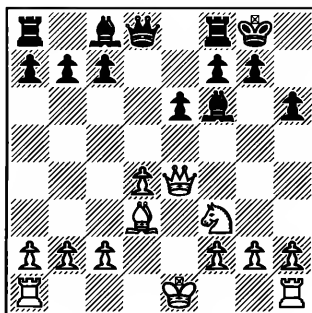


Figure 29—Black to move

After 11. **Qe4** (arriving at the position of Figure 29), I automatically expected Black to play 11... **g6** to defend the mate, which he did — after all, what else? This move, however, is a pawn move weakening the Kingside. Capablanca pointed out that the correct move was 11... **Re8**, protecting against the mate without the debilitating pawn move. Lasker once said: “Distrust a pawn move — examine carefully its balance sheet.”

What was my problem? Wasn’t I aware that I shouldn’t make weakening pawn moves — or expect them from my opponent? Of course I was. But I didn’t take it seriously enough. I didn’t look hard enough at alternatives to the pawn move.

So for the grabber phrase, why not Lasker’s immortal advice about distrusting a pawn move? See Figure 30. The note “Capa p226” simply means that the game in question is on page 226 in Capablanca’s *Chess Fundamentals*.

A word of caution. We don’t want to take advice mindlessly, even from a former world champion. You may want to analyze with a friend the position of Figure 29 after 11... **g6**, and convince yourself that White has good attacking prospects — or review the game in Capablanca’s *Chess Fundamentals*. This will

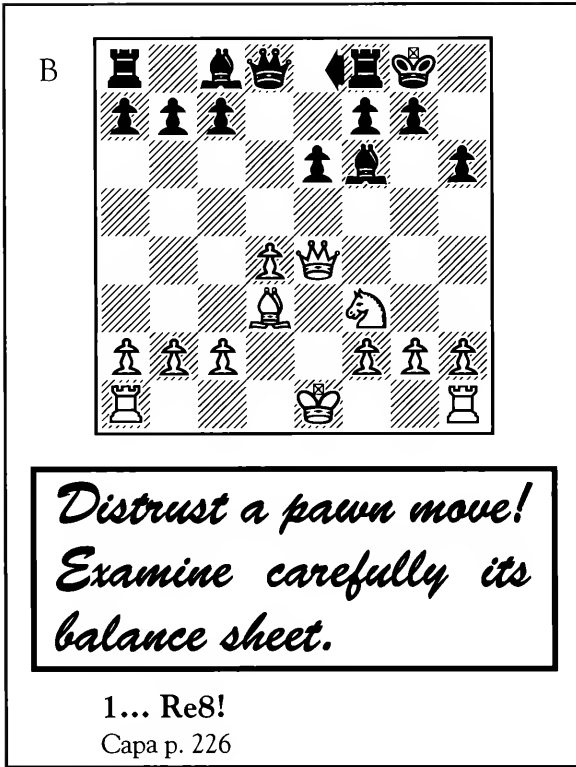


Figure 30

better fix the idea in your mind.

Playing the black pieces against Mike Johnson during one of the later rounds in the 7th Monadnock Marathon, Jaffrey NH, October 1984 (an annual 12-round tournament, played over a 35-hour period with rounds every three hours at 30 moves in 45 minutes), I reached the position of Figure 31.

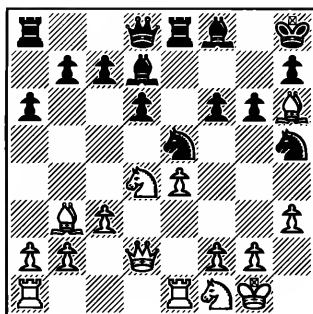


Figure 31—Black to move

I wanted to neutralize White's beautiful Bishop controlling the a2-g8 diagonal, and, since I couldn't play *1... Be6* immediately, I thought I could drive the Knight away from d4 by *1... c5*, following up with *2... Be6* and contesting the diagonal. The idea has at least two faults, of which we'll concentrate on one.

The worst thing is that I totally overlooked the *zwischenzug* (German for "in-between move") *2. Bxf8* wrecking my plan, since *2... Rxf8* (*2... cxd4* *3. Bxd6* just loses a pawn for Black) *3. Ne6 Bxe6* *4. Bxe6* leaves White with an iron grip on the diagonal that I just sought to neutralize (*4... Ng7* *5. Bd5*).

The *zwischenzug* *2. Bxf8* forced Black to recapture with the Rook, removing Black's control of e6 and allowed White to occupy the square with advantage.

The grabber phrase could be: "Watch out for the *zwischenzug*." I just chose "*zwischenzug*," since that would imply the entire phrase to me. See Figure 32.

The position of Figure 33 occurred in the October 1984 issue of *Chess Life*, in "What's the best move?" I correctly realized that the h2-b8 diagonal is useful to White, and that he therefore should protect the Bishop from being exchanged by the black

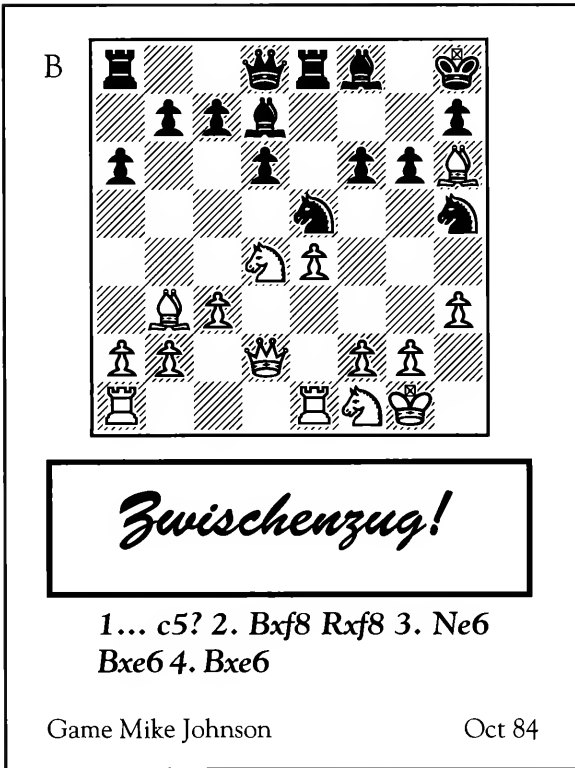


Figure 32

Knight.

I chose 1. f3, so that if 1... Nh5, I would be able to continue 2. Bg5† f6 3. Bh4 g5 4. Bf2. I had preserved my Bishop, but had turned a “bad” but active Bishop at f4 into a plain “bad” Bishop at f2 (the Bishop would be staring at his own pawns).

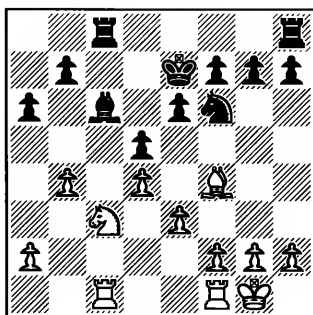


Figure 33—White to move

So what's wrong? The thing of value was the control of the diagonal h2-b8, and, therefore, the Bishop must be preserved — what is the meaning of the Bishop without the diagonal? The correct move was 1. h3, guaranteeing both objectives. My problem was that I vacillated on following through on something I knew was important.

I vacillated on following through on something important.

So now for our grabber phrase. It occurred to me that Manfred von Richthofen, the German World War I fighter ace, knew exactly what he wanted, and then did it. He is attributed to having said, after translation, “Find the enemy and shoot him down. Everything else is rubbish.” To me, that means: establish what your problem is, and then solve it. The grabber phrase “Von Richthofen” conjures up the decisiveness necessary to deal with this position. See Figure 34. For shorthand, a square not “blackened in” represents White, while one “blackened in” represents Black. So the second sentence in the notes of this Flash Card reads: “White to keep Bishop on the diagonal.”

Former World Champion Mikhail Botvinnik, in New York in 1984, said, “Chess is a game for strong

W



Von Richtofen

Select objective, then do it.
 OBJECT: To keep Bishop on diagonal. 1.
h3!
 1. f3? Nh5 2. Bg5† f6 3. Bh4 g5 4. Bf2
 WTBM Oct 84

Figure 34

people with strong character.” I reflected on that. I liked it. I thought it would be an uplifting reminder whenever I really get slaughtered at the board. So a Flash Card. Figure 35. Not every Flash Card needs to be a pearl of technical wisdom. Anything that can help improve your game, either technically or psychologically, is fit for a Flash Card. It’s perfectly okay for you to have a picture of your significant other as a Flash Card, if it boosts your spirits.

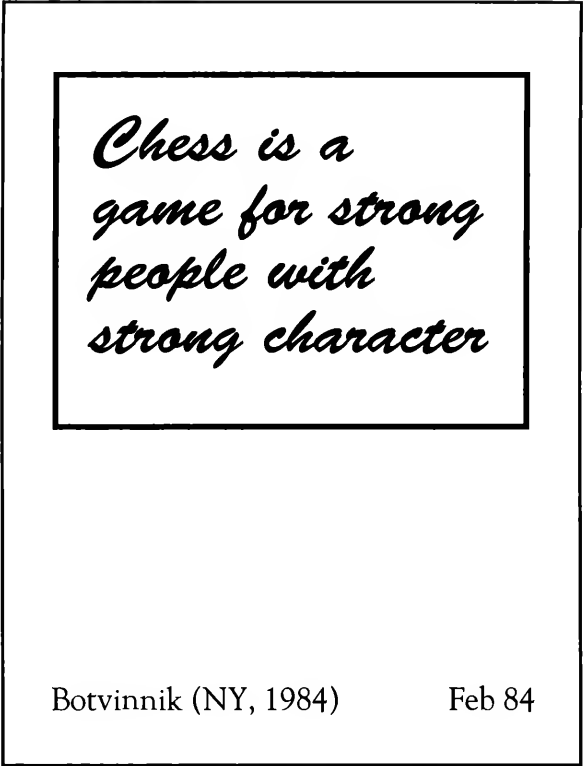


Figure 35

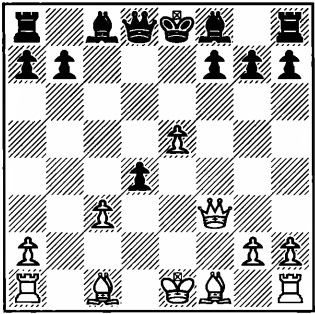


Figure 36–White to move

Figure 36 is one of the problems appearing in *Winning Chess Tactics Illustrated* by Al Horowitz. I

had properly deduced the first four half-moves, namely 1. Bb5† Bd7 2. e6 fxe6, leading to Figure 37.

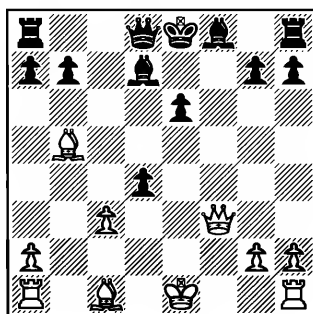


Figure 37—White to move

Conducting the white pieces, I came up with 3. Qh5†, figuring on general mayhem and Queen-foraging after 3... g6 (3... Ke7 4. Bg5† snares Black's Queen) 4. Qe5, threatening 5. Qxh8 as well as 5. Qxe6†.

In this line, after 3. Qh5† g6 4. Qe5 Black is at least in the game, since he can forsake his R/h8 with 4... Bxb5, since if 5. Qxh8 (5. Bg5 is answered by ...Qd5) Qh4† probably wins for Black (Ed. Note.).

I was so enthralled with the Queen check and apparently strong White position that I never even considered the devastating quiet move 3. 0-0! leaving Black helpless. White threatens 4. Qf7 mate, and if 3... Qc8, then 4. Qf7† Kd8 5. Qxf8† Rxf8 6. Rxf8†, winning. If 3... Qf6, 4. Bxd7† Kxd7 5. Qxb7† and 6. Rxf6, winning the Queen. If Black plays 3... Qe7, 4. Bg5 wins the Queen, since 4... Qxg5 5. Qf7† and 6. Qxd7 mate. Finally, 3... Ke7 doesn't save Black because 4. Ba3† and mate next.

We are not really concerned with whether 3. Qh5† is a good move. The real question is: Why didn't I see 3. 0-0? It's hardly a difficult move to find.

I contemplated this situation for a while. I con-

sidered what I would have played if Black's g-pawn were at g6 instead of g7 (where White doesn't have the check). I concluded that I would have seen the castling move, and its strength.

The lure of the check was the snake in the garden of Eden. My Flash Card grabber phrase: "Why always check?" Whenever I see this card, I will tell myself that even when a check is available (not just for me, but for my opponent when it's his turn), I must consider other moves. See Figure 38.

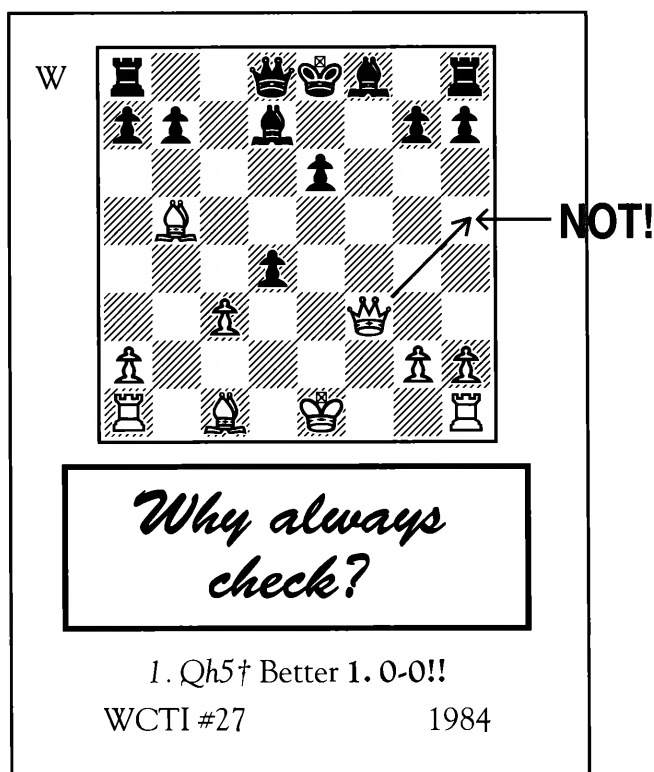


Figure 38

There is another lure of the check, when one is available: a check allows one's opponent fewer choices, typically, than he would have if one selected

a move that is not a check. The tree of analysis is simplified, and that is appealing. But it is a choice spawned by laziness, and one must always be on guard against that, since other, better moves are often available.

A final point regarding this position. There is nothing wrong with looking at only one move, one continuation, as long as it is a forcing one, and the “resultant quiet position” is strong or winning. That, of course, is practical. But in the great majority of cases, this is not the case, and therefore more than one move should be considered.

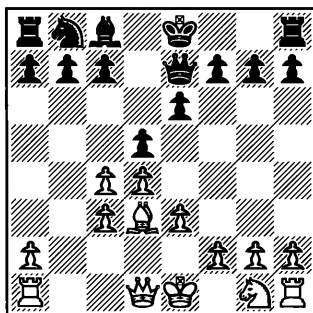


Figure 39—Black to move

In Figure 39, playing Solitaire, I was conducting the black pieces, emulating former World Champion Capablanca in Marshall–Capablanca, Match, 1909, also annotated in *Chess Fundamentals*. I chose some move other than 8... *dx*c4. The correct plan was for Black to get control of the h1–a8 diagonal by playing 8... *dx*c4, 9... *b*6, and 10... *B*b7. This idea never dawned on me. Why not? Again, I thought about this. Two factors conspired to keep me from thinking about it. First, I did not seriously think of playing 8... *dx*c4 — why weaken my center? Second, and probably more significant in stopping me from considering the theme, was that the h1–a8 diagonal was

littered with my pawns, at b7 and d5. Imagining the diagonal without these pawns didn't occur to me.

So my grabber phrase was: "Project lines of control." See Figure 40.

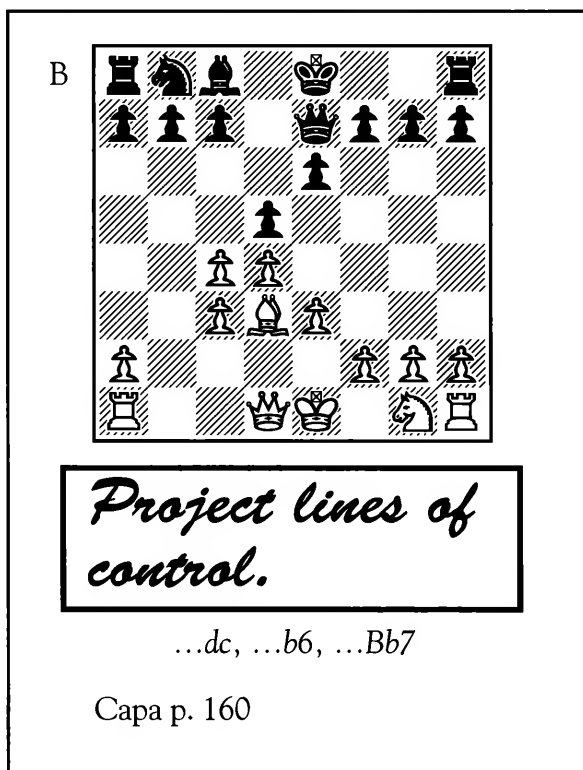


Figure 40

In the game John Loyte-Wetzell, Comeau Memorial, Danvers MA, August 1985, it was Black to play in Figure 41.

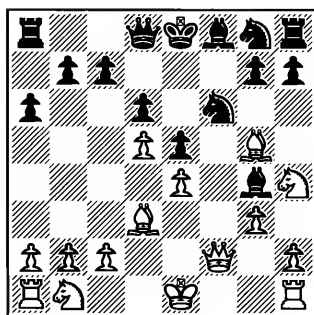


Figure 41–Black to move

I played 1... **Nxe4**, thinking I could snare a pawn with either 2. *Bxd8 Nxf2* or 2. *Bxe4 Qxg5*. Of course, my opponent saw 2. **Qxf8**†, winning a piece and the game (2... *Kxf8* 3. *Bxd8*).

So what happened there? At times I make the mistake of forgetting about a “vacated square,” meaning that during my look-ahead, whenever a pawn or piece is moved, I forget about that square being vacated, and that other pieces can “travel through that square.”

But here, the vacated square was part of the plan. The square vacated, f6, would allow 2. *Bxd8*. But vacating f6 would also allow 2. *Qxf8*. I expected him to make the *strongest* move, naturally, but the mistake I made was that I thought this strongest move corresponded to capturing the piece of highest value. I didn’t consider his taking a piece of lesser value. So the grabber phrase: “Beware the ‘Under-capture.’” See Figure 42. Again, this phrase (along with the diagram) will be a sufficient tickler for me to remember this game, and this idea, for the rest of my life.

I could have constructed another Flash Card from the same position with the grabber phrase: “Beware the Vacated Square.” This, as I just mentioned, because I never saw the possibility of 2. *Qxf8*†.

B

*Beware the
"undercapture."*

1...Nxe4?? expecting
2. Bxe4 Qxg5 or
2. Bxd8 Nxf2, BUT
2. Qxf8! winning

Game: Loyte, Danvers 30/30 Aug 85

Figure 42

b. Filing Flash Cards.

We'll learn in the next section on drill that we will refer to our Flash Cards often, and that we need to be able to flip through them quickly.

A filing system for Flash Cards should be: a) durable, b) portable or compact, c) easily accessible, and d) adaptable to making changes (rearranging cards, adding or deleting cards).

When I first started with Flash Cards, I developed a stack of 50 or so, and used a three-hole punch to punch a hole in one corner of each card; a ring held them together.

The drawbacks quickly became evident. The

cards get dirty with repeated use, and, more importantly, it is difficult to flip through the cards rapidly. They did not meet a) and c) above.

The next system was much better. Photograph albums — they come in ten-sheet and 50-sheet types — have hard, cardboard-type sheets with transparent paper over them. They're less than three dollars for the ten-sheet type, and are available at K-Mart and other stores. Each page holds four Flash Cards, so a ten-sheet book holds 80 Flash Cards. Although somewhat bulky (I accumulated eight of these ten-sheet photo books), this seems to be a workable system. It's durable, allows easy access, and is easily revised. If you intend to do your Flash Card reviews at home, this system is fine.

If, on the other hand, you like to do this review on the fly — in your car before going into a club, or at a fast food restaurant, a library, or anyplace “off-site” — these photo albums become very cumbersome. A more compact system, one I'm currently creating, uses durable protector sheets with three holes for insertion into a three-ring binder. The sheets are manufactured by Joshua Meier — Stock #06511 — and are thin enough so that a three-inch binder can hold 100 protector sheets, sufficient to hold 800 Flash Cards. To allow for the later removal of the cards, the Flash Cards are glued on both sides of a sheet of paper with a Dennison “Tack a note,” an adhesive stick working similarly to lipstick, then inserted into the sheet protector. “Tack a note” is available in most stationery stores for less than \$2. Filing, or tacking the Flash Cards onto paper and then inserting these into protector sheets, is somewhat more time-consuming than simply installing them into photo albums; but if you want to conduct your drills at an off-site location, this last method allows you to carry around only one binder, instead

of a raft of the photo albums.

If you're computer-literate, I'm sure there are ways to translate this information to a computer, or have a computer print out the equivalent of these cards. I'm only semi-computer literate, using word processing primarily, but want to make you aware that Thinkers' Press, Inc. (publisher of this book) has a chess font for use with standard word processing programs. Another company, Chess Laboratories, Box 3541, Pasadena, CA 91031 has a software package called "Chess Reader" for under \$70. Since I have not personally seen or used this software, I am not recommending that you buy it. Just want to make you aware of this resource.

You could use a loose-leaf notebook, without the transparent plastic page protectors, and without "hole reinforcers," using photocopies of the pages in the photo albums. The sheets will not tear or wear out, provided that you don't put too many sheets in the notebook, and that you turn the pages carefully.

c. Flash Card drill.

The Flash Cards you're putting together are, hopefully, quality *Images*. Preserving this type of *Image* on a Flash Card has the *potential* of converting it into a durable *Image*. The Flash Card, the potential durable *Image*, becomes durable on repeated revisiting or review.

Reviewing Flash Cards, or Flash Card drill, if you remember from our model in Part II, will have the same effect as increasing the evaporation time of the liquid. This is true for both the light and the heavy liquids. It will not halt the process of forgetting, but it will slow it down. A light *Image*, which might only "stick with you" for a few weeks without review, would stay with you maybe a couple of months with a

couple of revisits, and would probably stay with you for the rest of your days if you review it periodically, at sufficiently frequent intervals.

So we want to review the Flash Cards from time to time. As an objective, you would like to review each Flash Card at least once every two months.

Now let's see what that means in numbers.

I feel that reviewing 300 cards at one sitting (we'll show in a minute that this would require not more than thirty minutes) preferably in the hours before your most serious game of the week, is adequate to keep you sharp.

As long as you have less than 2400 cards (a very likely situation since I've developed only 800 Flash Cards in eight years—about two cards a week), you will be able to go through all your Flash Cards in two months or less.

As you start out, and possibly for several years, you will have fewer than 300 Flash Cards. During that time, why not review every card once a week? When you've accumulated more than 300 but less than 600 cards, you should break them up into two sets, and review the sets alternately each week.

As you become accustomed to the review process, you will be able to review a card in five seconds, or even a little less. Then you can review 300 cards in 25 minutes (5 seconds per card x 300 cards = 1,500 seconds).

It is important to point out that you shouldn't attempt to review the Flash Cards too fast. I've noticed that, for me anyway, it takes a little time for a thought to settle. If it is too fleeting, the reinforcement becomes compromised, or disappears altogether.

So 25 minutes of drill each week will support about 300 Flash Cards for that sitting, and allow you to review 2,400 cards at least once every other

month.

d. Stalking the grand themes.

As you work at chess, particularly with quality study, and you develop Flash Cards, each Flash Card should be a jewel, no matter how trite it may seem to another chessplayer. After all, a Flash Card has on it an *Image* that *you* missed in a game, or in some test in which *you* were involved, or a new, very good idea which you would like to capture permanently. The Flash Card is for you, not for anyone else. I'm sure very few Flash Cards of mine would be of real use to a grandmaster.

Sometimes, over a period of time, without being aware of it, you'll develop more than one Flash Card relating to a certain idea, showing various sides of a common theme. Then, almost out of the blue, you'll see the bigger connecting concept to several Flash Cards. Let's call that a grand theme.

I'd like to go through the development of one particular grand theme that, after a number of Flash Cards, all relating to the same topic, finally hit me. I developed these cards over several years.

I believe this material will be more interesting if we identify my grand theme *after* we've touched on the six cards.

We will now discuss briefly the circumstances giving rise to the Flash Cards illustrated in Figures 43 through 48.

In the game Wetzell–Carl Stutz, Westford MA, 1984, we reached the position in Figure 43, with White to move, already in some time pressure. Assuming that the white Knight at d6 was safe from capture because it was protected by the pawn at e5, and that the black pawn at b5 was unprotected, I blundered by playing 1. **Qxb5**, when Black naturally

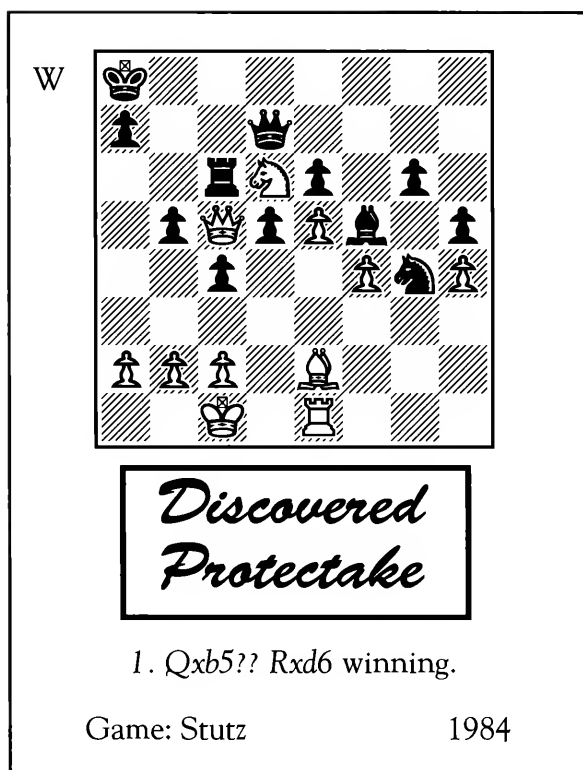


Figure 43

played 1... **Rxd6**, winning. I had not considered the discovered attack on my Queen with Black's move, and constructed the grabber phrase - "Discovered Protectake" — with the thought that the "take," here 1... **Rxd6**, protects the Queen. The Rook is itself indirectly protected, since White's Queen is under attack, and if 2. **Qxd7**, then the Rook recaptures, getting out of harm's way.

In the game Janowski–Maroczy, New York, 1924, in *The Book of the New York International Chess Tournament 1924*, annotated by Alexander Alekhine, Figure 44 was reached after White's 15th move. I was playing Solitaire, trying to find Black's moves. I never considered 15... Nxe4, because I thought Black would simply lose Knight for pawn. After 16. Qxe4 Bxh4, Black has temporarily won a pawn. Whether Black really wins a pawn here is not the issue, but the existence of the combination is. The grabber phrase on the Flash Card was "The Crossbow," because the Bishop moving along the diagonal is very fast, seemingly simultaneous with the preparatory move.

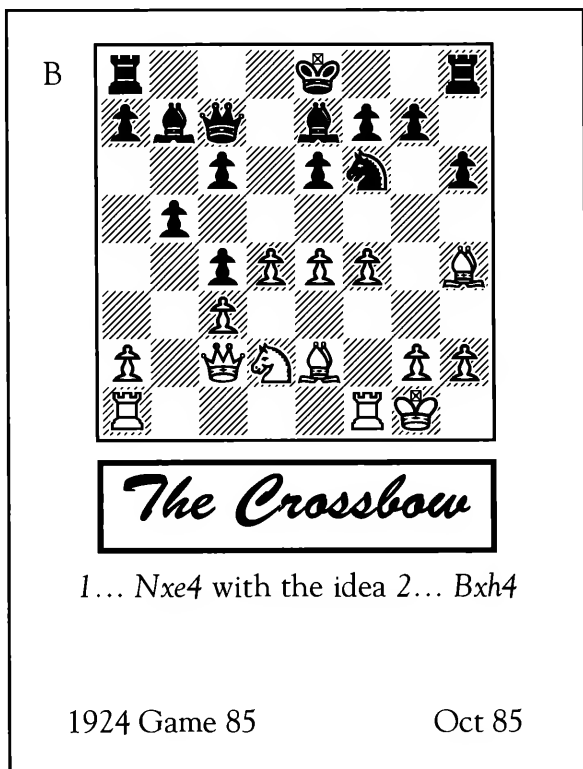


Figure 44

In the same game, the position of Figure 45 was reached after White's 22nd move. I was still playing Solitaire. I never looked at the pseudo-sacrifice 22... c5, played by Maroczy, opening the long diagonal for the Bishop and preparing 23... Be4. It is important to note that Maroczy should have played 22... Rxe6, avoiding the loss of the exchange (Maroczy's move allows White to play 23. Nd7, which he did, with an eventual Nxf8), but that is not the issue here. I should have looked at 22... c5. Again the grabber phrase "The Crossbow," for the same reason as the preceding example.

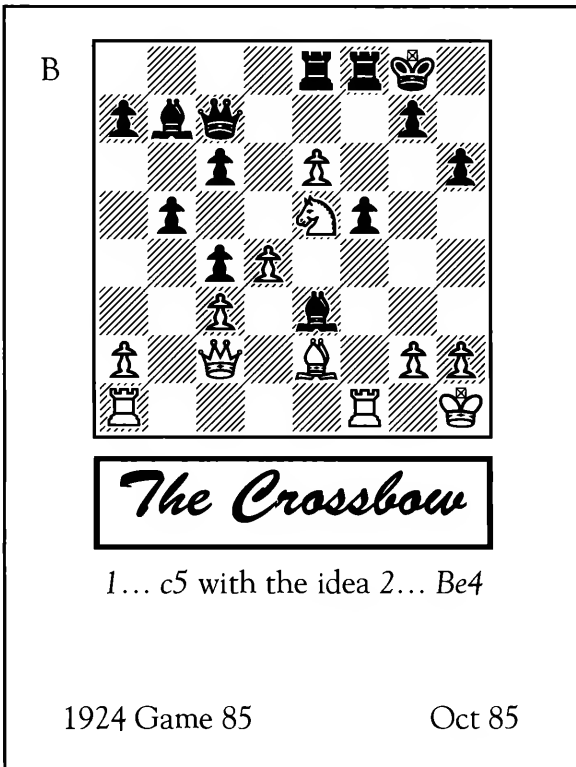


Figure 45

In the game Emanuel Lasker–Alexander Ale-

khine, New York, 1924, from *The Book of the New York International Chess Tournament 1924*, annotated by Alekhine, Figure 46 was reached after 20 moves. Here again I was playing Solitaire, trying to predict Lasker's moves. I never looked at 21. *h5*, probably because the pawn appeared to become *en prise*. Should Black then respond with 21... *gxh5*, White could continue 22. *Ne1* followed by 23. *Qxh5*. Even if 21... *Bxf3*, play would continue 22. *gxf3*, and if 22... *gxh5*, White will recover his pawn later with *Qxh5* after 23. *e4* and 24. *f4*.

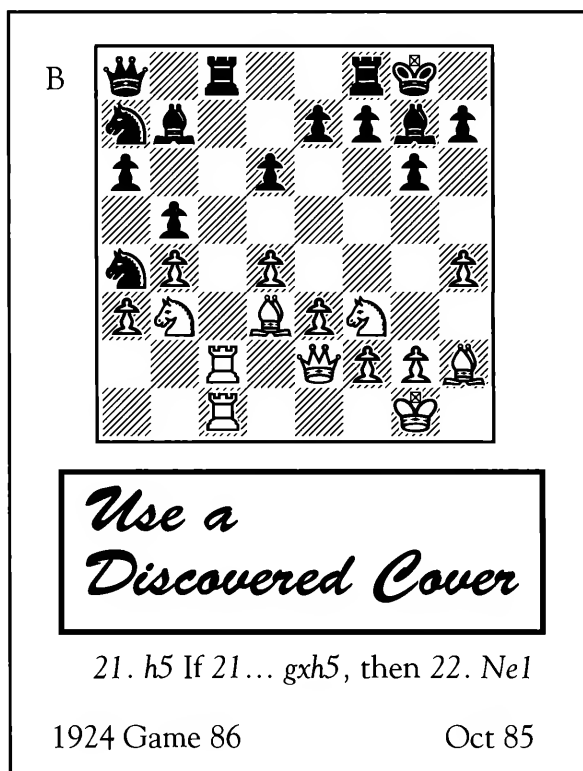


Figure 46

Again, the specific analysis here is not the issue, but that I didn't see the "discovered Queen recap-

ture.” I called the grabber phrase on the Flash Card
 “Use a discovered cover!”

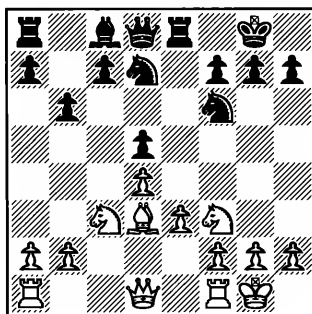


Figure 47 – White to move

In Botvinnik–Alatortsev, Master Tournament, Leningrad, 1932-1933, Figure 47 was reached after ten moves. Here I was playing Solitaire, trying to find the correct moves for the white pieces. I didn’t look at $11. Qc2$, at least not from the point of view of its real threat, $12. Nb5$. Here Black answered $11... a6$. When Botvinnik followed up tactically and weakened Black’s Queenside pawns.

Why didn’t I see $11. Qc2$ and $12. Nb5$ in looking for White’s 11th move? I didn’t have as a working motif, as an *Image*, the fact that $Nb5$ is really a double attack. It’s a discovered attack (the Knight screens the Queen from c7). It suddenly would attack the c7-square twice (Knight and Queen). The Knight also attacks a7. It is important to recognize that attacking a7 is not a meaningless issue: should Black consider the natural developing move $11... Bb7$ with the idea of clearing Black’s first rank in order to defend the coming double attack on c7 by $12... Rc8$, the pawn at a7 becomes undefended.

So the grabber phrase I chose was “Better than a double attack.” I constructed the Flash Card shown in Figure 48 with the position that would have arisen

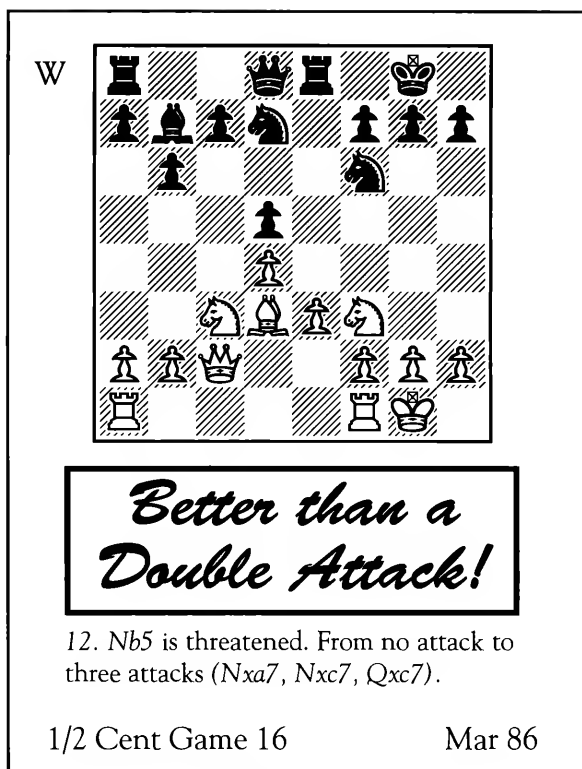


Figure 48

after 11. Qc2 Bb7. Botvinnik identified this possibility in his annotations of this game in his book *Half a Century of Chess*. The reason I chose that configuration in the “middle of an analysis” for the Flash Card, rather than the actual position after ten moves, is that it brings home the point of the discovered attack more quickly.

You may have guessed by now at the connecting theme among all these nine Flash Cards. They all have a feature we could call “discovered mobility.” I named the grand theme “DISCOVER AMERICA,” after some joking around once in a postmortem.

In each case, there was a piece arrangement

where one piece screens another, so that the mobility of the screened piece was not at its maximum. The power of the maneuver is, of course, the potential for a “free move,” or, if you prefer, a “double attack,” namely, the screening piece attacks a piece or a pawn or a desired square while the screened piece attacks a piece, a pawn, or a square along a rank, a file, or a diagonal inaccessible to it prior to the “discovering move.”

You might be wondering why three Flash Cards, developed over several years, are needed to bring home such a trite message.

Let’s step back and look at this example in a larger perspective. My “DISCOVER AMERICA” theme doesn’t mean I was blind to discovered checks. I knew about discovered checks. I love discovered checks, and I know I’ve played hundreds upon hundreds of discovered checks in thousands of Blitz games. I also knew about discovered attacks.

But I underappreciated, or undervalued, “discovered mobility.”

On the Flash Cards I use personally, I have written the grabber “DISCOVER AMERICA” conspicuously. The Flash Cards of Figures 43 to 48 do not have it, since we were trying to preserve a slight amount of suspense.

Every player, whether a beginner or a world champion, has some distorted assessments of certain tactical and positional motifs. For a beginner, they may be blatant — the most obvious being a huge over-assessment of the value of an “early lone Queen raid.” This one is, fortunately, so obvious that almost everyone quickly learns through experience to modify the perspective on it.

But even at the world level, and even for the World Champion, there can be flawed perspectives, which, if discovered and entered on Flash Cards,

may be corrected by the repeated reminder in these Flash Cards. He may be too reluctant to sacrifice material. All this means is that the percentage of his cross-board reflection time (his own clock time) devoted to analyzing potential sacrifices is less than it should be; or, possibly, that even after the analysis, he needs more assurance that he has full compensation for his sac than is really necessary. Of course, his problem could be the reverse: he may spend too much time on these potential sacrifices.

There are two other grand themes I discovered through Flash Cards that I want to touch upon, without walking through every Flash Card generated on the subject until I caught on.

(i) *The underutilized Queen.*

In a given game, a grandmaster moves his pawns, pieces, and King with a certain frequency, and is willing to exchange each of his pieces for certain others in a typical position. In Solitaire, in attempting to duplicate this grandmaster's moves, I have on the average used my Queen less often than he does.

This underutilization of the Queen, for me, reflects more the idea that I have an underappreciation of the Queen's mobility and safety, rather than that I apply an incorrect value, or point count, to the Queen relative to the other pieces.

Let's assume that, on average, the values of the pieces are pawn=1, Knight=3.5, Bishop=3.5, Rook=5.5, Queen=10. Then Queen+pawn=two Rooks, or two times 5.5. Also, three minor pieces (three x 3.5, or 10.5 points) are slightly stronger than the Queen.

So why do I underutilize my Queen? Is it because a) I'm afraid of getting her trapped? or b) I don't realize how powerful she is as a tool in the attack?

I feel it is a little of both, maybe a little more a) than b). Here a) is somewhat simplistic: I feel it isn't so much that I'm afraid of getting my Queen trapped, as it is that I feel my opponent will harass her too easily, forcing me to lose time by making retreating moves. It is more the result of a "defensive mentality."

Ironically, my Queen problem is the reverse of a rank beginner's Queen problem. We have already discussed the beginner's penchant for the "lone Queen raid."

This book is not meant to be a psychological manual, and we are not going to dwell on Sigmund Freud here, but I am absolutely convinced that my "Queen problem" is psychological in origin, relating to my earlier years. As a result, since I believe the problem is psychological in origin, its correction may take me a long time to root out, even though I have known about it for a year or more now.

The crucial point, however, is this: for me, the concept of Flash Cards made it possible to find this problem — my Queen problem. And I'm sure we can all agree that you must first identify a problem before it can be solved.

(ii) The overvalued Bishop.

In my Solitaire games — most of which in recent years have had the goal of duplicating former World Champion Botvinnik's moves in his games collected in *Half a Century of Chess* — I have established that I overvalue the Bishop relative to the Knight.

I will more often exercise the opportunity to exchange one of my Knights — one of Botvinnik's Knights — for an opponent's Bishop than he did in his actual games. The related shortcoming is that I will go to more trouble to avoid giving my opponent

— here Botvinnik's opponent — the opportunity to exchange one of his Knights for one of my Bishops. It is as if I think, and incorrectly, that Bishop=3.75, Knight=3.25.

This distorted perspective extends to other things, as you would expect. I overvalue the Bishop pair relative to Bishop-plus-Knight or two Knights. A Bishop pair is stronger than two other minor pieces on an open board, but my perception of an open board is cluttered with more pieces than a grandmaster's open board. Again, I have been aware of this problem, and am working on rooting it out.

During the several years of constructing Flash Cards, I developed a number of them reflecting this theme. The Flash Cards, over a period of time, piled up with this theme and drove the lesson home.

We probably have subtle but pervasive distorted perspectives in chess that could elude us all our lives. The distillation resulting from disciplined analysis of our games, entered on Flash Cards, could uncover these through the recurring theme concept. The periodic review of these Cards would then eventually eliminate these distorted perspectives.

Had the talented player whom I mentioned at the beginning of this chapter, with whom I played thousands of Blitz games, used the Flash Card technique, he probably would have found his false evaluation of "wild pigs" and corrected it. In all fairness to him, and so as to not mislead the reader, I've made up few Flash Cards based on five-minute sudden death games, because the lack of a score sheet makes them harder to analyze.

- e. Flash Cards must be correct!

From all the emphasis presented so far on Flash Cards, it should be clear that the major idea of each Flash Card will become second nature, a natural fact or idea that will stay with you always. As a result, it should be no surprise that a Flash Card with an incorrect idea will also be reinforced, damaging your chess capability.

To safeguard from having poor ideas, wrong ideas, or impertinent ideas repeatedly reinforced through the Flash Card vehicle, you should, if at all possible, have a stronger player review your Flash Cards and approve them.

2. Openings and opening sheets.

In this segment we'll develop two basic ideas: a) the right way to study openings, and b) a visual aid for learning openings.

- a. The right way to study openings.

Knowledge of the opening is critical to *Strength*. Let's examine why.

For most players, it is extremely difficult to figure out, over the board, the correct fifth, sixth, or any early move in a complex opening, such as the Ruy Lopez, the Petroff, or almost any opening, particularly the sharp ones. If you are trying to develop these moves over the board, there is a pretty good chance *on each move* that you will not find the best move. Let's assume that you happen to know the correct first five moves of your opening just from repeated exposure. Starting on the sixth move, then, you are "on your own." For Moves 6 through 12, or for seven moves, you're likely to make the best move only

about half the time. Now a player “booked up,” knowing the lines and refutations, has a good chance of obtaining a lasting advantage, often a winning advantage, just from your incorrect moves during Moves 6 through 12.

So, alas, in self-defense, you need to know at least reasonable lines for some number of moves.

One of the drawbacks of chess at the highest rating levels, in my view, is that opening knowledge is too large a piece of the *Strength* pie, where, for most people, they feel they must resort to some degree of move sequence memorization to stay alive, or to survive the openings. Eventually, I believe “pre-chess” will be adopted, where each player starts with only the pawns on the second rank, and the two players make their first eight moves each by placing, in turn, one piece on any remaining vacant square on his first rank until all his chess pieces have been placed, before any “moves” are made. This concept of chess would so proliferate opening variations that piece placement memorization, plus move sequence variation, would still be important, but less so than in the game with the current rules.

In any event, we don’t have to concern ourselves with this deeply, because I don’t believe it will happen before the middle of the 21st Century.

Many good chess books devote some portion of their contents to proper development of an opening repertoire, and none that I know of advocates memorization of move sequences. The problem is that developing opening knowledge properly seems to take such an enormous amount of time that many players resort to some amount of memorization.

In avoiding memorization, Larry Evans’s book *What’s the Best Move*, when properly studied, will impart a limited knowledge of the openings. I have been taking this “chess quiz” fairly diligently for a

while now, but as much with the purpose of improving **APROP** and the **Move selection Method** as for opening knowledge.

From our model in Part II, we know that a durable *Image* is better than a light *Image*, and *Images* obtained by understanding ideas are quality *Images*, and therefore more likely to be durable *Images*; *Images* gained through memorization most likely will be light *Images*.

So here, then, we have only the age-old advice of getting any number of good opening texts with the qualities described above, and learn the openings with the idea of developing quality *Images*.

b. Visual aids for learning openings.

Having explained the right way to do things in “a.” above, I nevertheless succumb, to a degree, to learning opening lines through a memorization or familiarization process.

I simply use a hand drawn sheet, shown in reduced form as Figure 49, in a format similar to *Modern Chess Openings*, or *ECO* (*Encyclopedia of Chess Openings*). These are tailor-made for the particular openings that I play. Figure 49 shows the lines I play as Black against 1. *e4*, when White continues with the Albin Chatard Attack. Normally, for any move of my opponent’s, I will always play only one move, but my opening sheet considers all reasonable replies to my moves.

I have a supporting diagram sheet (always starting with twelve blank diagrams) for each opening sheet. For Figure 49, the supporting diagram sheet is shown in reduced form as Figure 50. I file these in a special notebook (Duo Tang presentation binders available at Staples or Office Max) so that both the opening sheet and its supporting diagram sheet can

be viewed at the same time.

Without these opening sheets, when you want to refresh your memory on a line you first have to remember the source — was it MCO (*Modern Chess Openings*), or ECO (*Encyclopedia of Chess Openings*), or Reuben Fine's *The Ideas Behind the Chess Openings*, or some pamphlet — then, of course, you need to find the appropriate page — a real hassle.

The opening sheet has all that information.

Black: French Albin Chatard: 1. e4 e6 2. d4 d5 3. Nc3 Nf6 4. Bg5 Be7 5. e5 Nfd7

6. h4 c5¹

7.	Bxe7 Kxe7 ¹⁰	.....	Nb5 f6	.....	Qg4 Kf8
8.	f4 Qb6	.....	Bb5 Nf3 Qg4 cxd4 Nc6! Kf8 a6		Nf3 Nc6
9.	Nf3 cxd4	.....	Rh3 Na4 cxd4 Qc6		Qf4 cxd4
10.	Qxd4 .. Nxd4 .. Nb5 ² Nc6 ⁵ Qxb2 Nc6 Nxc5		Bxc6 dxc5 Rh3 Nh3 bxc6 Ndx5 ⁷ axb5 cxd4		Nb5 ¹² Qa5 [†]
11.	Qxb6 Qg4 Nxb6 ∞ Qxc5 ⁶		0-0-0 Nxe5 Bh6 Nf4 Kd1 Qb6 Nxe5 Nxe5 Nxe5 ⁸ h6		Bxe7 Kxe7
12.	0-0-0 h5		Qd2 Nc6 Qg3 dxe5 Nxd4 Réti- Nc6 gxh6 Qb6		± 149th
13.	Nb5 Bd7 ⁹	0-0-0 ... Nf3 Bd7 Bd7 1923	± 151th		± 148th
	152th	152th	151th		148th

and on to Black's 17th move in some cases.
th = Tim's Harding's Classical French

Figure 49

A typical opening sheet

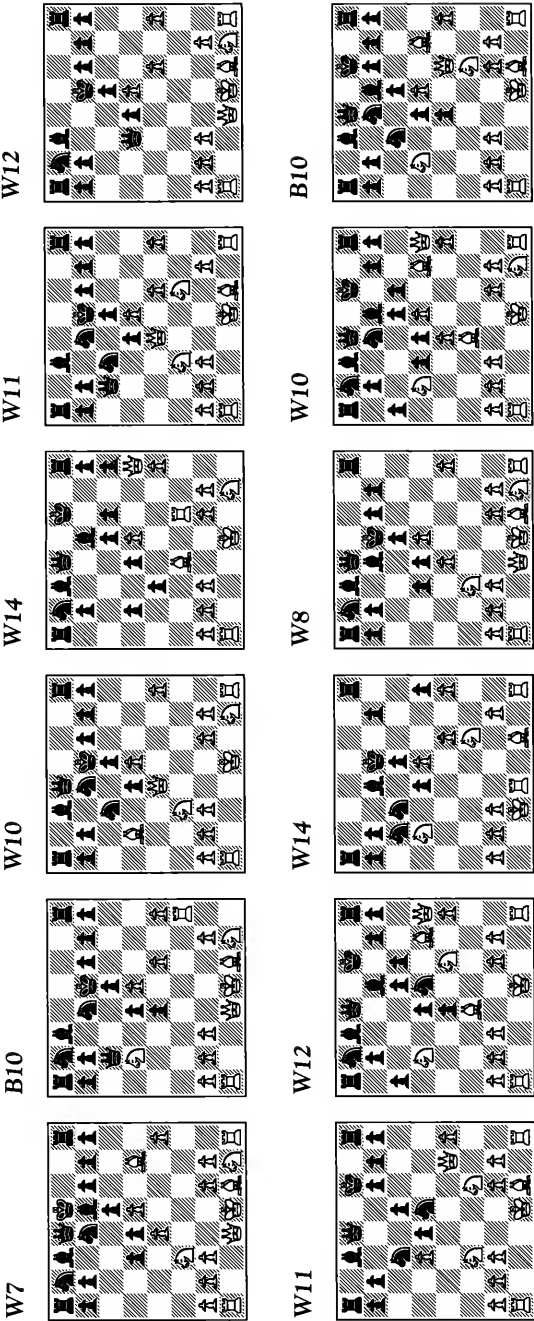


FIGURE 50
Diagram Sheet

CHAPTER FIVE

IMPROVING APROP

We described the Ability to PROject Positions (**APROP**) in Part II.

APROP is *the depth of the look-ahead (in the number of half-moves) and the accuracy with which that position is projected mentally.*

We'll now take up some specific ideas that one might employ to improve **APROP**.

A. Studying combinations.

It would seem natural that studying a diagram titled "White to move and win," or "Black to move and win," must help your **APROP**. For it is **APROP** that allows you to visualize the position several half-moves hence, where you can explore some moves for an advantage. Kotov, in his book *Think Like a Grandmaster*, gives exercises specifically directed to this end.

In *Chess Life* each month, on one of the first few pages, is a problems chess quiz. The *Chess Informant*, published three times a year, has a section on combinations. There are various books which have only combinations. I still frequently use Reinfeld's *1001 Winning Chess Sacrifices and Combinations*.

Studying combinations (without moving the pieces) involves *Images*, the **Move selection Method**,

and **APROP**, not just **APROP** alone.

*Studying the positions without moving the pieces forces you to visualize the future position, to project the position. In fact, moving the pieces waters down **APROP** improvement.*

B. Visualizing the first moves in a game.

In the normal mode of analysis, one looks ahead one, two, three, or more half-moves, then visualizes the position and assesses it as being equal, or favoring one player or the other, taking account of the material imbalance, if any. **APROP**, then, serves as the “forward landscape” from which to make the assessment.

An excellent exercise for **APROP** is to look at a game, any game — maybe one from an *Informant*, or any number of sources. You just look at, say, the first ten moves by each side, close the book in which the game appears, and rapidly construct the position on a chess diagram, using the symbols given in the section on generating Flash Cards. You could, of course, just set up the pieces on a board instead of drawing the position.

As you improve, you may try for 12 moves, and so on.

I have been doing this drill by setting up a chessboard with the chessmen set up at the start of a game. I then turn on a stopwatch, and proceed to look at the first ten moves of a game score between grandmasters, covering any diagrams pertaining to the game, and, of course, not moving any of the chessmen on the board. After drawing the position that I believe they’ve reached after ten moves on a chess diagram, I then turn off the stopwatch and, referring to the book, make the actual moves through Move

10 on the chessboard. I then compare the board position with my diagram position, and record the number of pieces and pawns that I have incorrectly placed on my diagram.

To proceed, I then use the set-up board position as my platform to project Moves 11 through 16, and repeat the process. I then do the same for Moves 17 through 22, and then 23 through 28. As a yardstick of competence for **APROP**, I add one minute for every incorrectly placed piece, and so have a total score — corresponding to the total stopwatch time plus the appropriate one-minute penalties. On the bright side, my total time, including the penalties, has been decreasing steadily. I believe this exercise, which I have been doing regularly, has already improved my **APROP**, and therefore my *Strength*.

C. The stickiness of the starting position.

There is a limitation that we have, surely different for each of us, on how quickly and accurately we can mentally run through, say, ten moves, fix these in our minds, and write the position down.

But I believe there are certain modes of error we all share to some degree and these may be correctable. For me, one of these is “the stickiness of the glue.”

In moving the pieces around mentally, I find I occasionally forget to mentally *vacate* the square that a piece moves from, more often than forgetting to occupy the square the piece has moved to. After studying the position (either in an actual game or in analysis), I sometimes find that my variation is wrong because, in my mind, I kept a piece on its *original* square as well as on its *new* square (the square it moved to). Mentally, then, it’s on both squares, leading to wrong analytic conclusions.

Let's say you're looking at the board in front of you during a game, and the majority of the pieces are still on the board. As you analyze, you now mentally move a piece — let's say it's a Knight. For the first part of this projection, you probably visualize the Knight on the contemplated new square, and for the second, you mentally erase the Knight from the initial position.

Of these two mental tasks, the chance for error on the second is much greater than the first, at least for me. Let's examine why.

If you're thinking of a move that is not a capture, you can dissect it mentally this way: let's say there are 24 pieces left on the board. There are therefore 40 vacant squares before considering this move. So the first part of the projection places a Knight onto one of these 40 squares. Visualize a chessboard with 24 occupied squares and 40 unoccupied squares, as in Figure 51 (the occupied squares are shown pitch black), and the Knight (the one that moved from f3) on g5.

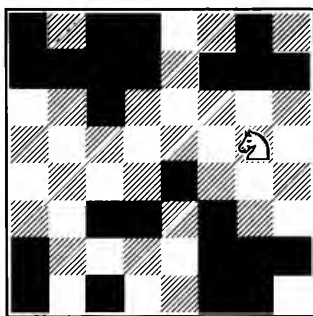


Figure 51

The other half of the projection of this move is the eradication of the Knight from f3. Here, one has to mentally maintain all the other pieces on the board — see Figure 52 — and remove the Knight

from f3.

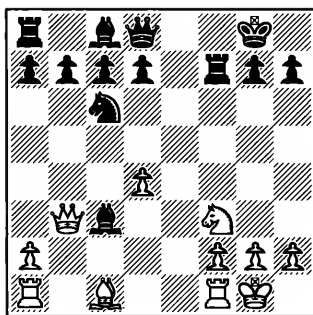


Figure 52—White to move

So what's the big deal? Why is that hard? Our mind has a built-in preference to keep all the pieces already there, since most of them will probably not move during this mental analysis. There is a certain stickiness for each piece in the mind. The stickiness safeguards all the chessmen against inadvertent evaporation — for that would be a disaster. We mentally cannot afford to have the glue “not sticky,” or else we’ll wind up with only half a dozen men on the board (in our mind) at the end of the analysis. The glue resists the removal of the Knight at f3; the glue is “fighting the program.”

For me, then, not removing the Knight from f3 is the more likely error in visualizing this move. It could show up, for example, in my conclusion that Black cannot play ...Nxd4 later in the combination because the white Knight at f3 protects that square, when, in reality, the Knight is not at f3 anymore.

The glue is “fighting the program.”

Another way this problem shows up during mental analysis is when the pieces move to different squares. Sometimes they move to a vacant square; or,

they may move to a square which has been vacated, as f3 in this example. I am much more likely to overlook the possibility of moving a piece to f3 than to some other square, because I may not have mentally “erased” the Knight from f3.

D. Analysis starting from a “platform.”

On many occasions, we may contemplate a move, often a sacrifice, where several half-moves would be forced, and then various branches would occur.

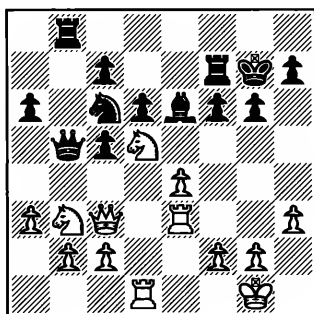


Figure 53—White to move

Figure 53 is an exercise that Kotov gave in *Think Like a Grandmaster* with the question “Can White play 1. Nxc7 Rxc7 2. Rxd6?” Here Black has various choices for his second move, and the **APROP** issue is this: can you clearly visualize the position after White’s second move, so that it becomes a reference, or a *platform*, which you can return to again and again as you evaluate various possible second moves by Black? Here, this book has no special suggestions — since I have not seriously dealt with this task yet — other than to alert you to the fact that this sort of situation occurs frequently, and that it would be very useful if you can make a mental snapshot of a position after several half-moves as a point of reference.

Thus, improving **APROP** is not a simple thing. *It takes practice, mainly in studying and projecting positions without moving pieces.* This is the chief suggestion in this book on improving **APROP**, although it doesn't involve Flash Cards. After you've missed something you feel you should have seen, examine this oversight by first asking: was it just too far ahead, too complicated for me to see for this type of time control? In other words, was it beyond my *Analysis Horizon*, or was it some pattern problem — maybe the glue we talked about earlier, or something else which can be identified and eventually corrected? If the reason is the latter, then this discovery is worthwhile material from which to develop a Flash Card.

Good luck with this phase of your improvement.

E. Optimizing the Analysis Horizon.

Figure 54 is an example of an *Analysis Horizon*. The center of the circles represents the current position, with me to move, say, playing the black pieces. The smallest circle is the set of all possible positions that can be reached by making my move, the next circle, all positions that can be reached after one move is made by each side, and so on. The spokes represent specific moves, with the solid spokes representing moves and responses that are actually being considered, or contemplated, and the dashed spokes representing all moves not being considered consciously. We can number the moves, or spokes, as shown in Figure 54.

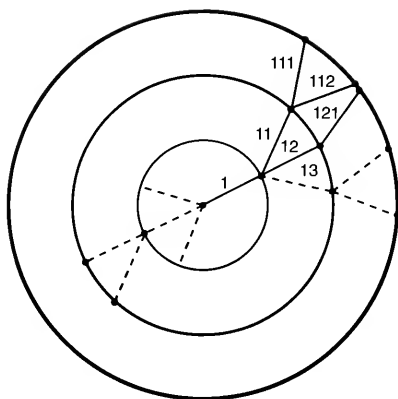


Figure 54

At any point in an analysis, at any position reached, we must decide either to evaluate the position then, or to project one more move, with possibly several move choices.

It would appear logical that the farther away from the center of the present position, the less reliable the evaluation. Now, to have a benchmark for discussion, let's introduce a couple of definitions.

Reliability of an evaluation: at any circle, or at any number of half-moves hence, it is the *least reliable evaluation* of all the points, of all positions, reached in that number of half-moves.

Evaluation at a circle: the least accurate evaluation of all positions that can be reached in a half-move from the next smaller circle.

Let us continue now from the assertion that the farther away from the center, the less reliable the evaluation. Two factors contribute: first, that the position being visualized is more moves into the future, and therefore more likely to be visualized with error(s), and, second, that there are a greater number of different positions to be considered, with the greater chance of at least one flawed evaluation.

This rationale leads us to the conclusion that we should strive to have the most reliable evaluation at the first circle, the next most reliable evaluation at the second circle, and so on. In fact, this infers that a **blunder** results from an analysis where the evaluation at one circle is seriously flawed while the evaluation at the next larger circle — or circles further out — is okay, or at least reasonable.

All dashed moves in Figure 54, specifically the ones that can be made by our opponent (here the move marked 13 is an example), represent potential sources of blunders.

A real example from my own games is the position of Figure 41 — already discussed earlier. Move 1 in Figure 54 was my move in the position, $1 \dots Nxe4?$ Moves 11 and 12 in Figure 54, shown solid, are two of White's responses, $2. Bxd8$ and $2. Bxe4$, that I considered. $2. Qxf8+$, a move I never considered, is the dashed Move 13 in Figure 54, and a move losing a piece for Black, a blunder. My evaluation at the second circle was flawed — again, because the definition of the evaluation includes *all possible replies* by my opponent — even the ones I never considered. My evaluation at the second circle was much worse than my evaluation at the next circle (I had looked at continuations to the moves marked 11 and 12 in Figure 54 — namely Moves 111, 112, and 113).

Figure 54, with the example above, shows the subtlety of chess *Strength*. We are held accountable — by the results of the games we play — for not only the ideas and moves we consider, but also for those we don't consider.

Since no one, no matter how quick, or how skilled, can consciously consider all possible moves for even two half-moves

We are held accountable for the ideas and moves we consider and also for those we don't consider.

ahead in a typical position, we must all quickly learn to rely on a very hard-to-define ability to “sort the wheat from the chaff” when considering moves and responses.

The key point of this section follows. I believe it is human nature to analyze further into the future for forced continuations — where the “trees” in Figure 54 don’t branch out, and where, particularly, our opponent is left with no choices in his moves — further than the cases where there are more options for both players, particularly for our opponent.

I believe that this natural tendency is a sub-optimal application of our analytical power. We would be better off making sure that, at each circle, the evaluation at the next smaller circle is better.

**I believe it is human nature
to analyze forced con-
tinuations to the exclusion
of unforced variations.**

CHAPTER SIX

IMPROVING THE MOVE SELECTION METHOD

In Chapter 1 we developed the **Move selection Method** as the general framework, the mental checklist, to structure our thinking to select a move.

In Kotov's book, *Think Like a Grandmaster*, he described in the first chapter how a typical club player organizes his thought process. The club player may look at a move for a while, then conclude: No, that doesn't work, go to a different "candidate move," evaluate that one for a while, conclude he doesn't like that move either, so he goes to the first move again, and ultimately jumps to a different move which he actually makes after very little reflection. This style of move selection, this jumping around from move to move, is part of the **Move selection Method**, although, as you might suspect, not a particularly good one.

However, interestingly enough, this has nothing to do with *Images* or **APROP**.

The analysis method directs "how the move selection process is organized."

For a given move selection, you may look at one continuation for two ply, then look at three branches each for three ply, and so on. You may decide to spend very little time on this move selection, since only one choice is being considered. You may consider one choice, or candidate move, go to another, return to the first, as we've discussed. This process is the **Move selection Method**, and impacts *Strength*.

Now, how to improve on that process?

I have only two related answers. One responds to the question generally, on a broad front, while the other is specific only to a particular fault in the **Move selection Method**.

A. Improving the Move selection Method (general).

Basically, this method calls for the understanding of *your* particular **Move selection Method**, followed by a critical review of it, preferably with a stronger player.

So, how do you go about understanding your particular **Move selection Method**?

The key is for you to try to remember, and record, immediately after a game, the details of how you thought about a particular move. You can select any move, or moves.

The idea would be this: normally, if you get an opportunity, you want to take advantage of the presence of your opponent for some postmortem analysis. This has several advantages that have already been identified. But every time your opponent either is unavailable, or isn't in the mood to review the game with you immediately afterwards, you should spend a few minutes just remembering a particular move, any move, and the *entire thought process*, the entire **Move selection Method** that you used to select the move, and write it down. This record is simply a "stream of consciousness," unedited, as you recall it, maybe an hour after you actually made the move.

As much as possible, you will want to write down every detail, particularly if you repeated any thinking of any part of the analysis. This set of notes may be similar to the ideas presented in Section C of Chapter 1. Since the example given there was for a master, don't be discouraged if your recorded **Move selection Method** is less deep or otherwise less adequate — I'm

assuming here that you're not a master — since that is precisely why you're going through this exercise. You might find some of its shortcomings by thinking about it yourself later, or discussing it with another, preferably stronger, player.

B. Specific limitations of the Move selection Method.

Analysis Fibrillation and Analysis Repetition are the most common and serious faults in the **Move selection Method**. They are somewhat related.

1. Analysis Fibrillation.

Now, what's Fibrillation?

I simply borrowed this term from the field of medicine. You're probably familiar with the term "heart fibrillation." Normally, the heart beats roughly once a second, contracting slowly and forcing a certain volume of blood through the body with each stroke, with each heartbeat. With certain types of heart attacks, the heart suddenly beats uncontrollably, irregularly, maybe three times a second, or possibly faster. When this occurs, the nature of things is that *no blood gets pumped through the body at all*. Everything is spastic. The patient dies within minutes if the situation isn't somehow corrected.

A parallel situation occurs in chess for some players, usually during **Time Pressure**, or sometimes when the player is dealing with a very difficult position. The common denominator here is a state of "lack of focus," possibly disenchantment, possibly desperation, possibly a kind of near panic. The most obvious way of noticing this effect is when a player looks at his clock very frequently, maybe every ten seconds, even though that player may have as much as two, or

even three, minutes left. If I'm checking my clock every five seconds while I still have three minutes left, this five seconds is *only three percent of the time left on the clock*. It is a sign that a new, weird mode of thinking has started.

What happens during this Analysis Fibrillation is that the player goes back and forth over the same analysis repeatedly, usually alternating between two particular candidate moves. He may say: Let's see — I'll go $Qe8\ddagger$, King goes here, click, clack, click, etc. — oh, I better go back to $Nxd5$, he goes here, click,

Time pressure panic is a sign that a new, weird mode of thinking has begun.

clack, click etc. No, $Qe8\ddagger$ and then repeats the *identical* analysis. But this analysis is usually very short, a mini-analysis, one branch of one line, with only a two- or three- ply depth. So the total depths

of these two mini-analyses that the player is vacillating between have a low total "analysis value" — just as a fibrillating heart pumps very little blood. Clearly, this is not in keeping with the normal description of the **Move selection Method** given in Part II.

Kotov, in *Think Like a Grandmaster*, presents a good example of what I would call Analysis Fibrillation near the beginning of the book, should you care to pursue it beyond the simple example given here.

Although Analysis Fibrillation is most likely to take place in **Time Pressure** while the player is also in a difficult position, it could take place at other times, while the player is not in **Time Pressure**. The common denominator seems to be anxiety, or hopelessness, or maybe panic, leading to confusion and indecision.

Normally, our analysis, whether it's correct or flawed, is nevertheless concrete. Something like: Let's see if the Bishop sac works here — I'll play 12.

Bxh7† Kxh7 13. Ng5† Kg8 14. Qh5 threatening mate at h7, but ah — he has *14... Ndf6* protecting the h7-point, and can follow with *...Rfe8*, making an escape path for his King.

Have you ever said to yourself in a game: “Oh my God, he’s going to kill me! He’s going to get his Queen down here and then what am I going to do?” And so on. It’s happened to me. Emotion has crept into the picture, and started to immobilize me, or paralyze my thinking, at least partially. One need not be a grandmaster to see that this sort of thinking isn’t really thinking. The Analysis Fibrillation is really a reflection of our mental evolution of millions of years, camouflaging our emotional panic. We all know we shouldn’t become emotionally panicked, so a shallow analysis, not really demanding of the brain, is our subconscious defense, masking the panic.

I feel it is difficult to break out of the panic mode described here, so the only defense I know is to pre-program myself not to get into that mode in the first place. As with drugs, the easiest way to avoid having to deal with the result of drug use is not to start using them.

2. Analysis Repetition.

This is similar in principle to Analysis Fibrillation. It is much more prevalent, however. It usually stems from a lack of sureness, and therefore the player feels he has to “double check” every analysis.

3. Blunders.

Earlier in Part III, we discussed methods of getting new ideas, including the follow-through of these with Flash Cards. Blunders, and Should-A-Beens, whether they result from a breakdown in **APROP** or

the **Move selection Method**, are the key targets of this “new ideas search.” So the rooting out of blunders and Should-A-Beens is embodied in the “New ideas/Flash Cards” exercise.

It is important to reflect philosophically on blunders. Many players chastise themselves for making blunders, but a blunder is simply a specific move with a bad outcome. I’m including here blunders such as a master, or even a grandmaster, leaving a piece *en prise*. The move itself results from following one’s best intentions, and, to borrow a hackneyed phrase, it seemed to be a good idea at the time. The harm caused by chastising oneself for making a blunder is that it leads to the false belief that blunders can simply be “willed away,” that they are a momentary aberration of thinking. With this attitude about blunders, that person doesn’t think it’s necessary to unearth the connection to other thoughts, since this was a random event that shouldn’t repeat itself.

So a blunder, even a gross blunder such as a master leaving a piece *en prise* while not in **Time Pressure**, should be carefully contemplated to search for the cause. I think of a blunder as the result of partaking of the forbidden fruit; to avoid its repetition, we have to find the snake so that we will not be lured in the same way again.

4. General thoughts.

To a certain degree, our **Move selection Method** gets right to the core of chess thinking, or thinking in general — the idea of orderliness in one’s thinking, the very difficult feature of the trade-off between being methodical, yet flexible, and so on. It is here that many chess books have attempted to impart some wisdom. I have no magic way to reduce that to a formula.

Some players become devastated upon leaving a piece *en prise*, or making a similar blunder. I have no magic bullet to stop this problem, but the severe shake up suffered by the perpetrator of the blunder can be harnessed into a desire to understand the blunder via the Flash Card method, as we've been saying all along. One more simple example might be helpful. A rank beginner, playing the black pieces, in the opening, allows his opponent to play *Bxb7* or *Bxg7*, losing not just a pawn, but a whole Rook besides. In reviewing this after the game, either despondent, disheartened, or enraged, he should come to the following conclusions, sooner or later:

1. Allowing *Bxb7* or *Bxg7* is especially nasty, since, unlike the other pawns, one can lose not just a pawn but a Rook as well, meaning that one has to be more care-

ful in forestalling the loss of these pawns to a Bishop, compared to losing other pawns.

2. One needs to be aware, on a move-after-move basis, of the presence of enemy Bishops on the long diagonals, so that one will not be surprised by one of these pawn captures.

3. One must be acutely aware of the presence of the opponent's Bishops on the long diagonals, even if they cannot immediately capture at *b7* or *g7* (or at *b2* or *g2* if playing the white pieces). The Bishop may be screened by a Knight (sometimes a pawn or a Rook), which might evacuate that diagonal with a threat or a capture of its own, leaving the door open to *Bxb7* or *Bxg7*. Then, capturing one or more of these thoughts on Flash Cards, one will slowly eliminate the frequency of this kind of blunder by repeated review.

A few ideas might be worth passing along. Again, studying your games should eventually bear fruit in this area, although this is the first of the subtle topics. If you have been playing without a plan, and you were not aware of the need for a plan, then this fact would be a difficult thing to unearth indeed (without a mentor, without help).

Here, then, it is important to look at some chess texts that cover this material. You will probably not find text material under the name **Move selection Method**, but you will be able to recognize similar topics. Again, Kotov's book *Think Like a Grandmaster* comes to mind, as one book, although by no

means the only book, with some sections on this general topic.

If you have an opportunity to analyze after a game with your opponent, particularly if you lost the game, do it — since weaknesses in your **Move selection Method** may surface.

Improvements in your **Move selection Method** will most likely take the form of a change in emphasis of the different constituents, such as the expansion of one item or deletion of another, in Figure 10.

If you had hours to ponder every move, it would be useful to have a long, detailed procedure that you've memorized for the **Move selection Method**. For rated cross-board chess, the mental list — there's not enough time to follow instructions on a written list, even if it were legal — has to be kept reasonably short for practical reasons.

Here, a word of caution. The main advantage we humans have over chess programs as they're presently structured is that the chess programs are very procedure-oriented, while we humans can cut through unnecessary procedures in order to make up for our much slower rate of analysis. To the degree that we "reintroduce" procedure into our chess thinking, we weaken our total capacity through inflexibility.

So each procedural idea must be carefully weighed so that it generates a net improvement in *Strength* — so that the blunders caught, or correct procedures found, more than make up for the time lost in the procedure. Specifically, employing BLUMENFELD'S RULE (doing a quick review for checks, forks, etc., just prior to actually making the move) could be considered as part of the **Move selection Method**, and may save you a serious blunder once every two games, well worth one or two seconds a move.

CHAPTER SEVEN

MODERATING ATTITUDE

The effects of personality on your chess are subtle, elusive, yet far-reaching. Look hard, study, and ask to discover them. Then evaluate and take action.

The author

The effects of personality have an indirect effect on *Strength*, in that they interfere with the improvement, and even just the maintenance, of the basic Components of Chess Capability, namely *Images*, **APROP**, and the **Move selection Method**. You can liken it to a young man wanting to become a great race-car driver. His various abilities will determine how quickly and how well he learns. Now imagine that he has to wear fogged-up glasses all the time. The fogged-up glasses are the racing counterpart of some negative personality quirks. These will reduce the acuity of his vision and limit his rise among the other drivers.

The factors taken up in this chapter are desire, objectivity, time management, discipline, on-line toughness, physical fitness, and various personality influences.

Some characteristics of our behavior, such as whether we tend to be punctual or tardy, industrious or lazy, decisive or vacillating, and frugal or free-spending, are part of our character or personality. Probably, the character and personality of most people, once they reach their teens, change only slightly during their remaining lives.

We've seen in Part II that some aspects of our character and personality influence *Strength* — such as procrastination (**Time Pressure**) and objectivity.

The purpose of this chapter is to alert you that, left to our own devices, we need overwhelming evidence showing the bad effects of a personality flaw (tardiness, for example) before we start to correct it (becoming more punctual, for the example of tardiness). And so with other features of our character and personality. I'd like to heighten your sensitivity to the features of our character and personality which influence *Strength* — procrastination, decisiveness (often tied to procrastination), objectivity, caution/recklessness, and others more subtle.

The reason for the “durability of personality quirks” is straightforward: without making a special effort to look for the quirks in our personality and character which influence our *Strength*, not enough information, not enough feedback, not enough post-mortem analysis, and not enough home analysis will take place in a year, a decade, or even a quarter of a century to convincingly force us to correct these flaws. It is one major reason, I believe, for the “Soltis curve” — which states that the great majority of players do not become significantly stronger after their period of development of about eight years.

To improve, then, you must seek to identify these personality and character quirks, by asking other players and friends, and by analyzing your games.

If you're fortunate, and find one or more of these quirks, you can minimize their effect on your *Strength* either by purging this quirk or by working around it. Usually it's much easier to work around it. We'll deal shortly with what I consider the most serious effect of personality and character on chess, namely **Time Pressure**. This is caused by various different possible factors, such as fear of failure. This

book recommends working around it rather than trying to root it out directly. Incidentally, working on rooting out the personality quirk is a good idea. It's just that this book has the objective of improving your chess, within a reasonable timeframe, not making you over into a new person, which, if successful, would take considerable time.

A. Can desire and discipline be improved?

*It's the stuff that dreams are made of
It's the slow and steady fire*

Carly Simon

Do you really want to improve your game? Is your ultimate goal in chess to have a *Strength* more than 100 points stronger than your *Strength* today? As a refresher, we'll restate that a 100-point improvement would mean that you would eventually win an average of about five games in an eight-game match against a player whose *Strength* is equal to your current *Strength*.

This discussion has a premise that you will not improve 100 points from a *Strength* plateau without some study commitment. A *Strength* plateau means a *Strength* that has been reached, and is relatively stable, after some months or years of play.

Four specifics come to mind:

- a) *How much and how steadily you study,*
- b) *how you study,*
- c) *what you study,*
- d) *your attitude at the board.*

Discipline is the engine that galvanizes these four activities. But discipline is the direct result of what your chess means to you, the direct result of

your desire to be a better player. If you're serious about becoming a better player, that desire can be directly measured by the discipline you marshal over the four items just mentioned.

To me, the true source of discipline is one's "global view" of the game, one's desire. Desire translates to discipline. So desire can't be improved. It's really just a mirror of the seriousness with which you take the game. But if you can intensify the seriousness with which you take your game, this will increase the discipline over your game.

Let's discuss the four specifics.

1. Study time.

Discipline makes itself felt in major ways.

One of these is the steadiness, the reliability, of the player's training program. If your study regimen calls for the study of endings every Sunday for two hours, then discipline is the policeman that makes it happen.

It takes study to improve your *Strength*, and discipline to do the studying. Although Carly Simon's quote was written about the romantic state of a relationship, I'm sure she'll allow me to quote those words for excellence in an endeavor as well. It seems easier to me to schedule and study 45 minutes a day to get in 20 hours a month than to plan two ten-hour sessions in a month. If you can really get these marathon study sessions scheduled, and you don't fatigue easily, then do it — the marathon sessions have the advantage of efficiency. Once at a task, it is easier to get on a "roll" in a marathon session, and make breakthroughs. The down side of the long sessions is that they're harder to schedule, and therefore you're less likely to get them in. I've accomplished more by rising earlier in the morning

most days, dedicating that time to this book, than by the big chunks of time I've scheduled to accomplish big tasks.

2. Study methods.

If you're going to study, then study without distractions. Discipline keeps the television or radio off while you study. Discipline is also linked to objectivity. Discipline keeps you studying with an open mind, looking for new ideas.

3. Study materials.

If you know that your endgame is weak, but you elect to "study games" rather than concentrate on the endgame, you're operating in an undisciplined manner. You know by now that you should concentrate your study on the weakest part of your game, even though this may not be as much fun.

4. Your attitude.

This comprises both your "at the board" and "off the board" intensity.

At the board: It's how hard you try, how well you hang tough and don't start "pushing wood" at the first sign, or the second sign, or any sign, of adversity.

Off the board: it's your resolve to study when you'd rather be doing something else, your openness in accepting analysis input from other players, particularly weaker players, and your keenness in learning and studying new ideas.

Summarizing, if you really want to improve substantially — let's say 100 rating points or more — recognize that this will not happen without disciplined attendance to your game. If you are not will-

ing to study, then you must admit to yourself that you will not improve substantially beyond your platform *Strength*.

The choice is yours.

B. Improving objectivity.

Some people feel the rain, others just get wet.

Roger Miller

In Part II, we talked about the importance of objectivity in chess. To improve in chess, you must have a correct assessment of the weaknesses of your game. This correct assessment stems from your own critical review and critiques by others, like your opponent in a postmortem. It requires objectivity to assess your weaknesses correctly, and it also takes objectivity to accept criticism from fellow chessplayers at face value.

There is a "Catch-22." Everyone thinks he's objective, because if he perceived he were not, he would set out to correct this problem.

Everyone thinks they are objective.

An article in the April 1988 issue of *Chess Life* by Dr. Don Ifill summarized the results of a survey of chessplayers (taken at the 1987 World Open) about reasons for winning and losing. The answers showed that chessplayers displayed a considerable lack of objectivity by attributing losses much more to blunders than to superior play by the opponent, while wins were attributed much more to superior play than to a blunder by the opponent. There is plenty of bias or lack of objectivity to go around. So please take this section seriously.

There really is a very simple reason for this. At any stage, or level, of *Strength*, in order to improve, a

player needs to know what's wrong with his game — in the general sense — such as incorrect assessments of a position, and so on.

To establish what's wrong, one needs an unbiased assessment. Bias will distort this assessment and slow down, and possibly worse yet, derail, the process of improvement.

In order to improve a player needs to know what's wrong with his game.

Let's try some thoughts out.

Have you ever heard anyone — a club player for example — make statements of the following nature:

- 1) Oh, yeah, I got into time pressure and then lost a pawn.
- 2) I don't like Larry Evans's *What's the Best Move*, because sometimes I don't agree with his answers.
- 3) Oh, yeah, I should have won that game. I just made one stupid blunder.
- 4) I guess I was satisfied with that tournament. I just lost a couple of games I should have won.

These kinds of statements show limitations which influence the rate of progress of the player making any of them. In 1) above, the player is implying that it's okay to get into **Time Pressure**. In 2), he's implying that it's okay to disagree with a grandmaster, without a careful and thorough analysis as back-up. In 3), he's implying that making blunders is either a natural condition such as breathing, occurring involuntarily from time to time, or an event you can't do anything about — it happened this time, but hopefully will not happen again. In 4), he's implying that he was ahead in material (or positionally superior), but some freak of nature intervened on his

opponent's behalf.

If you think of new information as coming through a window, objectivity is akin to the size of the window. The more objective we are, the more new pertinent information we gather during each encounter.

Improving objectivity encompasses two tasks: a) establishing whether you really are objective, and b) correcting this lack of objectivity if you determine that you're not.

To determine whether you are objective, ask another chessplayer who knows you well. You may be fortunate to know a stronger player whom you can ask. There are two related points. First, you must ask the question in such a way that the player is comfortable with giving you either answer. Second, if, on hearing the answer, you are tempted to argue, stop yourself and admit to yourself that you're not objective.

Testing Your Objectivity

- 1) Do you give vague and lame explanations to yourself, and others, when they ask you about how you played in a game, particularly if you lost or drew?
- 2) Do you have trouble listening to a lower-rated player?
- 3) Do you explain your losses by "one-of-a-kind" unusual situations which account for this result? You might offer that you were extremely tired after some party or other event the previous day, or that you'd never seen that variation of the opening before, or that you had made a silly oversight.
- 4) Do you often have trouble admitting that you're wrong in a personal, non-chess-related discussion?

Possibly by now you're questioning your objec-

tivity, while hopefully you agree that clearheaded objectivity is a must. Just admitting to yourself that you're not really objective is the hard part, and gets you halfway there.

Becoming more objective starts with admitting to yourself that you don't have all the answers, that there's nothing wrong with admitting that you made a mistake or blunder — if not to everybody else, then at least to yourself. By admitting these things, you are opening up new vistas of improvement.

If you have a friend who plays chess, and who sees your games now and then, you may ask him to keep an eye on you. Kibitz with him, or analyze a game with him, now and again, and he can try to remember your level of objectivity.

You can make up a checklist of questions, which could contain the questions above, and “take your own pulse” maybe once a year by checking off appropriately “yes” or “no” for these questions.

C. Improving Time Management.

In Part II, we identified Time Management as the handling of the clock. It's how one allocates time.

The two major components of Time Management are (1) the avoidance of **Time Pressure**, and (2) the allocation of extra time to positions with special demands on them, and its counterpart, the rapid dispatch of moves which are more or less forced.

I strongly advise that number (1), the avoidance of **Time Pressure**, must be mastered before any real thought of number (2), the allocation of extra time to certain positions, comes in.

To avoid **Time Pressure**, as will be seen shortly, more or less equal segments of thinking time, or reflection time, must be given to each move. Allow-

ing oneself the luxury of taking additional time under certain circumstances only fuels the potential for **Time Pressure**.

1. **Purging Time Pressure.**

Most people with a **Time Pressure** problem never get rid of it. The late Sammy Reshevsky, as an example, never did. This section will show you a sure-fire way to get rid of this problem, if you're among the unfortunates who have it.

a. The bane of **Time Pressure**.

Almost every strong player I know believes that **Time Pressure** is a bane, a real scourge. At the risk of belaboring what might appear to be an obvious assertion, let me state it in italics.

*Over the long haul, allowing yourself to get into **Time Pressure** will get you worse results than those you would obtain by avoiding **Time Pressure**.*

If you get one thing out of this book, I'd like it to be your understanding of the "bane of **Time Pressure**," and your progress out of it.

You've undoubtedly heard many times the importance of playing with a plan; it's covered well in many texts. I remember particularly the space Kotov devotes to it in his book *Think Like a Grandmaster*. I couldn't agree more. However, as strongly as I feel about playing with a plan, I feel even more strongly about keeping out of **Time Pressure**. A corollary statement to the one above is this:

If forced to choose between playing with a

*plan, but getting into **Time Pressure**, and playing planlessly, but keeping out of **Time Pressure**, do the latter.*

Now you know how serious I am!

The statement above is so bold, so shocking, that it deserves an explanation.

Usually, a plan bridges a number of moves, with various possible objectives, such as securing a good square for a Knight, and so on. What the italicized sentence proclaims is that, when **Time Pressure** is upon you, or even if it's only looming, one must downsize one's ambitions, one's plans, from deeply thought-out ones to simpler ones (avoiding loss of material, making any move which appears to improve, or at least hold, the position, and so on).

Again, this may result in a further deterioration of the position, since your opponent probably has more time, and can strengthen his advantage. It is akin to the boxer who is hurt, and must now try to survive to the bell in the hope that his one-minute rest will change things. This, in my view, gives us a better prospect to stay in the game, to get to the time control alive, than to grind up more of the clock, and being faced later with severe **Time Pressure**.

- (i) *You must believe that **Time Pressure** worsens results.*

If you already clearly believe that getting into **Time Pressure** worsens results, you can skip to the next section. If there is any doubt, however, please digest this section carefully.

I would like to convince you through logic that getting into **Time Pressure** is detrimental to your results and, therefore, your playing strength. This

concept is so important for you to believe that three different rationales are presented next to support it.

The rationale based on statistics.

Let's review a popular line of reasoning claiming that **Time Pressure** is not detrimental to one's game. This line of reasoning hinges on two clearly true assertions, a) and b) where a) gains and b) loses, with the conclusion c) asserting that what's gained in a) is greater than what's lost in b).

a) Playing slower than "schedule" for the first half of the moves (let's say) will produce a position at "half-time control" more favorable than if you played "on schedule."

b) Playing in **Time Pressure** during the second half will yield a position at time control inferior to the one you would reach if you had "normal time," assuming that you start from the same position at "half-time control."

c) The position reached at the time control will be better by playing more slowly during the first half — reaching a better position at "half-time," even though you're rushing your moves during the second half.

Statements a) and b) are true, but not statement c). I feel statement a) is only modestly true. You play only slightly better by taking 50 percent more time. But statement b) is starkly true. By taking only a quarter of the time per move, say, you play markedly less well, and are much more prone to blunder. As a result, I think statement c) is clearly false, averaged, as always in these sorts of considerations, over a number of games.

The killer combo/blunder argument.

Some players believe it's better to take more time earlier in the time control to get to a winning, or at least a superior, position, after which it is easier to play out the remaining moves in the time control. On average, this simply isn't true. Let's be more precise, because the point is so important. In any given game, it is possible that thinking about any particular move an additional 30 seconds may produce a flash — a winning combination — that immediately clarifies the game and makes the remaining moves simple. This possibility, or, more accurately, this probability, must be realistically assessed: the chances are much greater that you will not find the “killer combo” (because it probably doesn't exist), use up time that is earmarked for later moves, and eventually have to make moves at an accelerated rate. The likelihood that you will then overlook something, with serious consequences, which you may not have overlooked if you had that extra fraction of a minute each move must be weighed against that “fishing expedition” you went on earlier, borrowing time from later moves. *The nature of the game makes an omission — a blunder — leading to a loss much more likely than a good idea leading to a win.* So this borrowing process is extremely unwise.

The “your opponent will play faster, too” argument.

Some players believe that when you get into **Time Pressure** your opponent will play fast himself, his “rationale” being that you would be deprived of the benefit of his thinking time. This, your opponent would presume, would increase his advantage even more. But in fact, he is now more likely to blunder because of his self-imposed **Time Pressure**.

This scenario may come true now and again, but it is the same kind of idea as playing an inferior, but trappy, move. The trappy move may land your prey, but I do not know any good players who endorse that strategy. So this argument, the idea of suckering your opponent into playing quickly, is also bad.

Let's look at the logic of this. If your opponent maintained a normal playing schedule — keeping a steady reflection time per move (maybe a minute and a half) — while you are in extreme **Time Pressure**, we can develop an equivalent reflection time ratio. For the sake of quantifying this, let's define “pure reflection time” as the time when your own clock is running. If your opponent is reflecting on his move for a minute, you benefit from that, but not the equivalent of a whole minute. Since, typically, your opponent selects his move from, say, three reasonable choices, we could divide his reflection time by three and add that to your own reflection time — the “pure reflection time” — to get an equivalent reflection time.

We could look at the equivalent reflection time another way. If you are in **Time Pressure**, and are preparing your next reply while it's your opponent's move, you might spend 20 seconds preparing your response to each of his reasonable expected moves. If he moves after a minute, you have spent 20 seconds in advance on his particular move.

We are now ready to develop numerically the reflection time ratio. You are in extreme **Time Pressure**, making moves at the rate of four per minute. Your opponent is playing on schedule to a 40-move-per-hour time control, or 90 seconds a move. Your equivalent reflection time is 15 seconds (you are moving at four moves a minute) plus one third of his 90 seconds. So it's 15 plus 30 for a total of 45. His equivalent reflection time is 90 seconds (he is mov-

ing at 40 moves per hour) plus one third of your reflection time, one third of 15 seconds, for a total of 95 seconds. The reflection time ratio is $95/45$, or slightly better than two-to-one. If he speeds up and moves in 30 seconds, your equivalent reflection time would be 15 seconds plus one third of 30 seconds, for a total of 25 seconds, while his becomes 30 seconds plus one third of your 15 for a total of 35 seconds. This development shows that it makes no sense for your opponent to rush his moves, since he is diminishing the reflection time ratio.

There is no foundation in logic, all other things being equal, for him to take this approach, and therefore you should not expect it, just as you don't select your moves with the idea that your opponent is going to make an inferior move.

Do you think **Time Pressure** is bad? This is a very important question. Your prospects for curing your **Time Pressure** problem depend on your recognition that it is indeed a problem. There is nothing profound about this. From what I understand about alcohol rehabilitation, for example, the first step toward a cure is to admit to oneself that there's a problem.

Get ready to go through the flow chart in Figure 55, slowly and seriously. If you get to a place marked YES AGAIN, come back to this place in the text. If you exit anywhere, then you're not ready to proceed with a remedial program to get rid of your **Time Pressure**.

If you reached YES AGAIN, you are ready to go to the next section.

CURING TIME PRESSURE

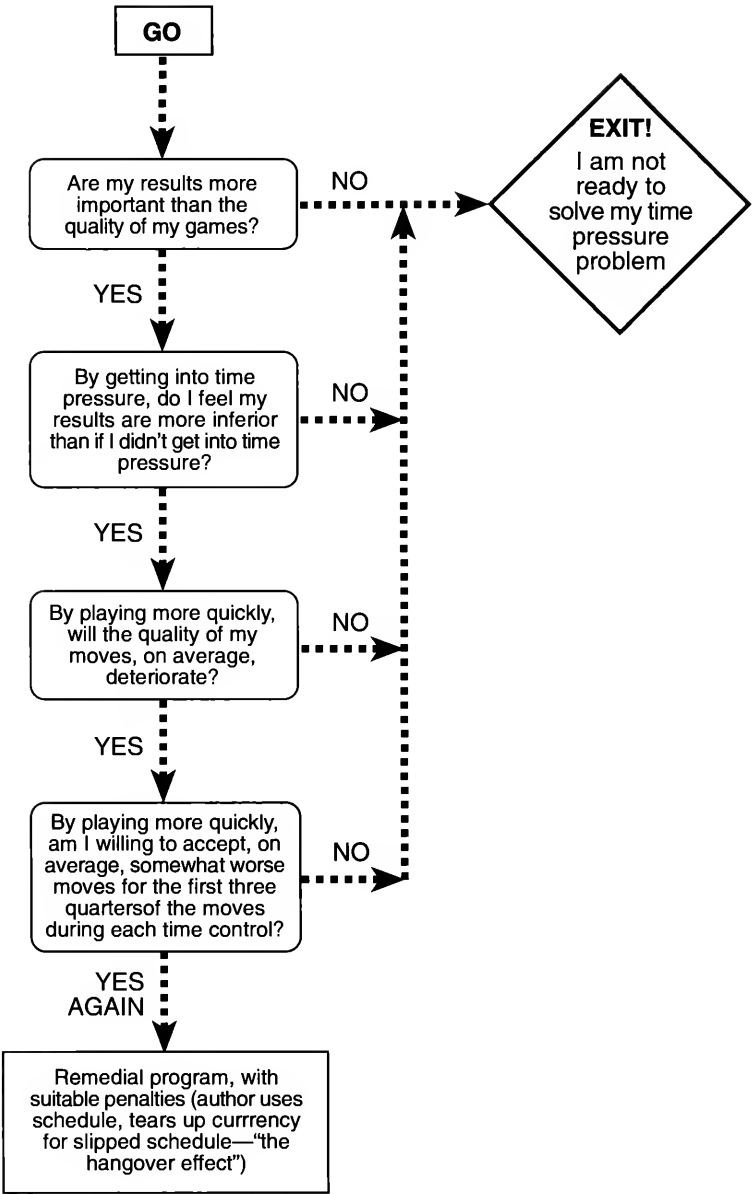


FIGURE 55

(ii) *The false premise of “Relative Time Pressure.”*

Relative Time Pressure was defined in Chapter 1, Section D.

There is an allure to embrace Relative Time Pressure as a method of managing one’s time, since it would often be a softer, an easier, time management than the standard “linear scheduling” we’ve been talking about. For example, you start out intending to keep pace with the “linear schedule,” but if you should fall behind, you start using Relative Time Pressure as a yardstick, by saying to yourself it’s okay to get into **Time Pressure** *as long as your opponent is more short of time than you are.*

I strongly advise against using Relative Time Pressure as a measure instead of “absolute **Time Pressure**,” the one we’ve been talking about. You would be relying on the idea that “you can make as many reasonable moves in one minute as your specific opponent for that game.” You would be allowing the outcome of the game to be very strongly influenced by “who plays better in **Time Pressure**.”

Although there is a correlation between playing strength at, say, two minutes a move and strength at six seconds a move, there are many cases, many players, where this is not true. Again, we have to be careful to define our terms. At 30 moves an hour, you may be among the best two percent of the players, reflecting a certain rating. At five seconds a move, you may stand only among the best ten percent of the rated players, considerably weaker as measured on the Blitz level.

By allowing Relative Time Pressure to rule your time allocation, you have suddenly agreed to be scored by a different yardstick. It’s as if, when time gets short, you’ve agreed to put away the chessboard and replace it with a “GO” board, or maybe a

“PENTE” board, and play one of these games — with an advantage comparable to the one you have in the chess game at the time — to determine the outcome of the original chess game. Unless your ability in “GO” or “PENTE” is as good as it is in chess, you’ve made a bad deal!

So don’t even consider Relative Time Pressure as a working tool.

(iii) *The causes of **Time Pressure**.*

Some chess authorities have tried to deal with this subject. They principally feel that there is a mechanical reason for it, such as thinking too slowly, and, therefore, deal with the problem from that base. Former World Champion Mikhail Botvinnik, for example, recommends playing practice games at quicker time limits, undoubtedly because he feels that being forced to think faster, or to prune your thinking, will eliminate, or at least reduce, the problem. There is, of course, some element of validity in this rationale.

I feel, however, that **Time Pressure** problems are mainly psychological in origin. Four major causes of **Time Pressure** are described next, three of which are psychological in origin, and the fourth one technical.

Weak move compulsion.

When we’re playing a rated game involving a clock, and are making moves at a rate slower than the schedule, we eventually become sensitive to **Time Pressure** approaching, and start to pull ourselves together, speeding up our moves to avoid the blunders that go with **Time Pressure**, and also to avoid an outright time forfeit. The onset of this

feeling, which NM Allan Bennett calls “move compulsion,” is a personal thing, and varies from player to player. Let’s call “strong move compulsion” the timely reaction to the problem, while “weak move compulsion” allows the time situation to become more critical before the player tries to rectify it.

The degree of move compulsion a player experiences is really a part of his personality. My guess is that a player with weak move compulsion is also not as easily intimidated in other facets of life. He is likely to start preparing his tax return much closer to the deadline than the person with strong move compulsion, or experience a more severe symptom of disease (such as pain or a lump) before deciding to seek medical attention.

So the degree of move compulsion is really a reference point from which one must work to combat **Time Pressure**.

Weak move compulsion is probably the most important, the most prevalent, cause of **Time Pressure**.

But you might now object to this exposition, claiming I’m just playing with words, since you might consider weak move compulsion not as a cause, but a *definition*, of **Time Pressure**.

I don’t want to debate this hypothetical objection. I want to declare that weak move compulsion exists either because the player does not appreciate the serious consequences of **Time Pressure** or because it’s part of his personality.

The cop-out/fear of failure.

No one who plays chess competitively likes to lose. We learn, most of us not easily, that losing is going to happen, and that we must come to terms with that. Each time we lose, we explain to ourselves

what happened. Our ego demands it. “I tried a new line, and I wasn’t familiar with it but my opponent was, so I got into time trouble and lost.” Or, “I tried a pawn sacrifice, but it wasn’t sound.” Or, “My opponent played a really good game!” (Why is it so hard for most of us to admit that as a reason sometimes?) And there are various other reasons we sometimes have.

Imagine that halfway through the first time control, you get a severe stomachache that diverts your attention so you can’t concentrate, and you lose as a result. I wouldn’t use that as an excuse with my opponent, but I would certainly feel that it was the explanation for my loss, and legitimately so.

Now imagine that I played slowly, slowly enough to get into **Time Pressure**, did not build up a superior position, and had to rush (**Time Pressure**) my last dozen moves, some of which were poor, and lost as a result. During the postmortem, I point out to my opponent that I got into **Time Pressure**, and that’s why I made the bad moves. What a beautiful alibi! It wasn’t me, it was the **Time Pressure**. My ego is intact. My loss was caused by an external event (implying, of course, through no fault of my own). My slower play during the first half of the moves improved my chances of getting a better position than if I had moved “according to schedule” — and then, if it doesn’t work out, I’ve got the old **Time Pressure** excuse. It’s just like the previous example of the stomachache.

Not exactly!

You can already tell the difference. The stomachache really was accidental; but the **Time Pressure** I walked into with eyes open, of my own free will.

That’s the cop-out. Or fear of failure. I take no personal responsibility for losing the game, get myself some free thinking time by playing slowly and

maybe getting that overwhelming position or finding that fantastic sacrifice, and all the while have the **Time Pressure** excuse ready if I lose.

What a beautiful setup. Perfect for the ego. No chance of failure. But, how disastrous for my game!

The perfectionist.

If you get into **Time Pressure** because you simply have to find the best move all the time, then you're a perfectionist. If you feel guilty about making a move quickly, even if it's a fairly obvious one, then you're probably a perfectionist.

There are, of course, combinations of causes (cop-out and perfectionist) which are not easy to distinguish.

The procrastinator.

Some of us always wait for the last minute to get things done. If you don't get your income tax in until the last minute, you're probably a procrastinator. There is a combination of some lack of discipline and laziness at the root of this problem.

Well-meaning time mismanagement.

The typical scenario for getting into **Time Pressure** is standard. The player spends an inordinately long time in making, say, the first half of the moves of the time control, and then has to rush the other half. There is no question that, on the average, the quality of the "early" moves will be better (but probably only slightly better) in this case than if the player plays "on schedule." The "well-meaning time mismanager" here feels that he is more likely to have a better position that will tend to play itself. He is, so

to speak, expecting to get into **Time Pressure** (in some of the games — those in which he hasn't attained that clearly superior position) because he thinks it maximizes his chances of winning. I know only one master who feels this way, even though I believe he's dead wrong.

Playing for the future.

A major cause of **Time Pressure** arises from the set of priorities that certain players have. They feel that they must develop some minimum level of understanding of the position in front of them, or that the move being contemplated must meet some minimum standard of quality. These considerations transcend in importance that of the clock. As a result, these players get into serious **Time Pressure** frequently. They may also feel that they're trying to play the best chess down the road, say, in ten years, even if that means sacrificing some wins and draws presently.

This is actually a logical, self-consistent set of considerations. However, there is an implied concept which I believe is incorrect. This implied concept is that the games being played at the present time have a real value not just in the technical sense, but also in the sense that they provide experience in the crucible of competition, which is one of the cornerstones of improvement. The flaw is that the player has already written the game off, subconsciously, halfway to the first time control. Should he get short of time, he considers the game an investment in the future.

The competitive game against a human opponent, then, in my view, has no more value than a game against a computer program. It is practice for the future, but the practice will probably last a life-

time. In the meantime, he will score, rating-wise or performance-wise, at a level consistent with the serious disadvantage of frequent **Time Pressure**.

Summarizing, I feel that we must, to maximize our performance not just in the present but in the future, concede that the top priority is to find the best move *within a certain timeframe*, not to find a move we're satisfied with, or an understanding of the position we're satisfied with. That "certain timeframe" is, give or take a little, the number of minutes left in the time control divided by the number of moves still to be made.

b. The remedial program.

We'll get into specific remedies for **Time Pressure**, but must first quantify the degree of **Time Pressure**, rather than use only the rough descriptions "simple" and "extreme." The reasons will become evident later.

(i) *The mechanics of **Time Pressure** tracking.*

Time Pressure demerits, and their use, are based on move scheduling in such a way that each move, or set of moves, is treated with equal weight. The first five moves are allocated as much time as the five moves completing the time control. Also, we know that, most of the time, a game is decided, and play becomes easier, by Move 30. So why, in a 40-move time control, should we allocate as much time to the last ten moves (Moves 31 to 40) as we do, say, to Moves 21 to 30?

It is true that the first five moves are usually a "gimme" — meaning that the time allocation is a gift, since we typically have enough opening preparation to know how to play the first five moves with

little thought. However, scheduling this time will not do any harm, and will be available to be allocated as extra time in difficult positions.

An argument can be made that we probably will not have serious reflection to do after Move 30, and should therefore allocate the available time to other moves (maybe 6 through 30), where the real fight is. The problem is this: even if, in three quarters of all games, little reflection time is required for Moves 31 to 40, and as a result we “give that time away,” then in one quarter of the games there will be insufficient time available to think about those moves, when, in fact, the outcome of the game is still very much in doubt. To me, the improvement in the quality of Moves 6-30, by allocating the time belonging to Moves 31-40 to them, is not worth the risk of being short that one game in four.

**I believe ALL
moves should
be allocated
equal time.**

So, all moves are allocated equal time.

We will need to quantify **Time Pressure**. We'll need to know, on some scale, how bad the **Time Pressure** was that we got into during the game.

Why do we need to make a federal case out of it? You may say we know **Time Pressure** is not good, and that is it!

There are degrees of **Time Pressure**. If you're playing a game at 40 moves per hour, and you have three minutes to play your last ten moves, that's extreme **Time Pressure** as explained in Part II. However, if you only have half a minute to play ten moves, that's very much worse. Worse because you're much more likely to make a blunder in such an environment.

So let's work out the actual **Time Pressure** merits and demerits.

Move scheduling, record keeping, and demerits.

The degree of **Time Pressure** that a player has allowed himself to get into is important, and the reason behind quantifying the **Time Pressure**. This degree will be identified by **Time Pressure** demerits. The more **Time Pressure** demerits, the worse is the **Time Pressure** transgression.

So we need a structure, a way to determine **Time Pressure** demerits. As you might suspect, **Time Pressure** and **Time Pressure** demerits are based on your clock performance — not on the *quality* of your moves, but on the time you've taken *relative to a prearranged schedule*.

The simplest way to learn how to determine your **Time Pressure** demerits is to go through a game example — the scheduling of moves, the recording of elapsed time — and the **Time Pressure** demerits system.

Let's begin. You're playing a rated game at forty moves per hour, with a subsequent time control of 20 moves per half hour.

Everything is done in five-move chunks, which we'll call a "quint." How much time should you take to make the first five moves, the first quint? Forty moves is eight quints. So divide the time left, namely 60 minutes, by eight (eight quints), getting seven with a remainder of four. We'll always forget about the remainder. So you have seven minutes to make the first quint. That would leave you 53 minutes (60 minus 7) at the end of the first quint. Before you start playing, you enter a 53 — this is the schedule, or plan — in parentheses next to the fifth move. You also draw a line below the fifth move, as a visual aid. See Figure 56. We'll put an empty box at the right of the fourth move, which you'll fill in with the actual

time remaining when you've completed the first quint. If this all sounds very complicated to you while trying to play chess, don't despair. We'll talk about a visual aid in the next section.



round no.			
opening		date	
vs.			
White	Black	White	Black
1		21	
2		22	
3		23	
4		24	
5	(53)	25	
6		26	
7		27	

FIGURE 56

Let's say you've completed the first quint in three minutes — you're familiar with the opening, and can therefore play quickly. This would leave 57 minutes on your clock. You enter a 57 in the box at the right of the fourth move. Also, by subtracting the 53 from the 57, you've earned four merits, and enter a +4 in the circle next to the sixth move. See Figure 57.

The second quint is next, with 57 minutes left on your clock after five moves. While your opponent is thinking on his fifth move — let's say you're playing the white pieces — you calculate your schedule for the second quint. You have 35 moves, or seven quints, left in the time control, and 57 minutes left. Fifty-seven divided by 7 is 8 with one left over. You have eight minutes to play your second quint. You subtract 8 from 57, leaving 49, and enter 49 in parentheses at the right of Move 10. See Figure 58.

		round no.	
opening		date	
vs.			
White	Black	White	Black
1		21	
2		22	
3		23	
4	57	24	
5	(53)	25	
6	+4	26	
7		27	
8		28	
9		29	
10		30	
11		31	
12		32	
13		33	
14		34	
15		35	

FIGURE 57

		round no.	
opening		date	
vs.			
White	Black	White	Black
1		21	(-4)
2		22	
3		23	
4	57	24	17
5	(53)	25	(21)
6	(+4)	26	(-8)
7		27	
8		28	
9	47	29	7
10	(49)	30	(12)
11	(+2)	31	(-13)
12		32	
13		33	
14	35	34	3
15	(40)	35	(4)
16	(-3)	36	(-14)
17		37	
18		38	
19	27	39	1
20	(28)	40	(0)
		(-13)	

Figure 58

As you complete your tenth move, or your second quint, let's say you have 47 minutes left on the clock. You enter a 47 in the box at the right of Move 9 — see Figure 58 again — and now calculate your total merits or demerits. You have fallen behind two minutes during the second quint: 47-49 is -2. You have obtained two demerits during this quint, which, after you combine with the four merits after the first

quint, will give you a net of two merits ($4 - 2 = +2$), which you will enter in a circle at the right of Move 11. See Figure 58 again.

We'll go through one more quint in detail. While your opponent is thinking on his tenth move, you want to compute your schedule to complete your third quint. Your thinking proceeds this way. I have 30 moves left to play (40 moves minus 10 already played), or six quints (six sets of five moves each). I have 47 minutes left. So 47 divided by 6 quints is 7 minutes per quint with a remainder of 5. So I have seven minutes to play the third quint, and therefore enter a 40, which is $47 - 7$, in the parentheses to the right of Move 15. Again Figure 58.

Imagine now that you get bogged down, and, upon completing your 15th move, you have 35 minutes left. You enter 35 in the box at the right of Move 14 — still on Figure 58. During this quint, you have obtained five demerits ($35 - 40$ is -5). You combine these five demerits with your total accrued merits of $+2$ through the second quint, for a new total of 3 demerits. See Figure 58 again.

This is the first time you're in the red — with net demerits — and you can see that it was caused in the second and third quints because you took more than the allotted time in each of these quints. Figure 58 also shows the scheduled time, the elapsed time, and the demerits for the fourth through eighth quints. On completing the 40th move, you had one minute left in this hypothetical game, which would show in the box to the right of Move 39. Note that in this time control, the last two quints were played in simple **Time Pressure**. At 40 moves per hour, the last ten moves — any ten, for that matter — have a 15-minute allotment. But there were only 7 minutes left after 30 moves, somewhat less than half the sched-

ule. This is reflected by the accrual of the 13 demerits by the end of 30 moves.

It is important to continue the process into the second, and all subsequent, time controls.

In the next time control, 20 moves are to be played in 30 minutes. At the beginning of the time control, you will have 31 minutes (30 plus one minute, the one minute being the time on your hanging flag after your 40th move) to make Moves 41 through 60. You will use merits and demerits again, starting from a clean slate rather than adding or subtracting from the previous 13 demerits.

The reason for starting over with merits/demerits is so that you cannot avoid “standing trial” for your 13 demerits by trying to offset them with merits in the second time control, when the situation is often clarified and moves could be made quickly.

Up until recently, I used to keep merit/demerit records primarily during the first time control, and rarely for subsequent ones. However, as was pointed out to me by Allan Bennett, it is important to keep a merit/demerit record during subsequent time controls to maintain the same thought processes — to avoid disruption. Interestingly enough, because of fatigue and other factors, one may start to play *too rapidly* in a second time control, often making slovenly and half-thought-out moves. Your merits would, in this case, rapidly pile up, alerting you to this situation.

The next quint schedule card.

The calculations we went through in the last subsection were very simple division and subtraction types, but it is possible that you may feel overwhelmed by these — not so much because of the math, but because you are trying to think of chess moves. The extraneous arithmetic merely confuses

things.

All true. But an important mitigating factor is present. You'll get used to it so that you can do these calculations in your sleep. You probably remember the first few times you used a clock, and how it disrupted your thinking. But that problem soon passed. After a while, you will not need the schedule card we will describe shortly. I used it for a while — and then weaned myself from it.

Using the “next quint” schedule card.

Let's do some examples.

We want to schedule the first quint in a 40-moves-per-hour time control. Our objective is to determine the entry in the parentheses on Figure 56 (or Figure 58) at Move 5, representing the “next waypoint.”

On the card in Figure 59, we first find the **60** in the column at the left. This is the number of minutes we have left. We then look for the column heading with a **40** on the card, then down to the row with the **60**. We find that number to be a **53** (“A” on Figure 59). So the entry on Figure 58, if we used the card, would be **53** to the right of the fifth move, the same as the entry we originally figured by doing the arithmetic in our head.

Let's look at some other entries on Figure 58 now. We had 57 minutes left after five moves played. On the card, in the column under 35 moves, and across from the **57** in the leftmost column (the time left), is a **49** (“B” on Figure 59), which becomes the entry for Move 10. Again, this number is the same as the entry on Figure 58, because the entries in the card have been calculated the same way as our development in the previous section.

		THE NEXT QUINT SCHEDULE CARD															
		40	35	30	25	20	15	10	40	35	30	25	20	15	10		
A		60	53	52	50	48	45	40	30	30	27	26	25	24	23	20	15
		59	52	51	50	48	45	40	30	29	26	25	25	24	22	20	15
		58	51	50	49	47	44	39	29	28	25	24	24	23	21	19	14
B		57	50	49	48	46	43	38	29	27	24	23	22	22	21	18	14
		56	49	48	47	45	42	38	28	26	23	23	22	21	20	18	13
		55	49	48	46	44	42	37	28	25	22	22	21	20	19	17	13
		54	48	47	45	44	41	36	27	24	21	21	20	20	18	16	12
		53	47	46	45	43	40	36	27	23	21	20	20	19	18	16	12
		52	46	45	44	42	39	35	26	22	20	19	19	18	17	15	11
		51	45	44	43	41	39	34	26	21	19	18	18	17	16	14	11
		50	44	43	42	40	38	34	25	20	18	18	17	16	15	14	10
		49	43	42	41	40	37	33	25	19	17	17	16	16	15	13	10
		48	42	42	40	39	36	32	24	18	16	16	15	15	14	12	9
		47	42	41	40	38	36	32	24	17	15	15	15	14	13	12	9
		46	41	40	39	37	35	31	23	16	14	14	14	13	12	11	8
C		45	40	39	38	36	34	30	23	15	14	13	13	12	12	10	8
		44	39	38	37	36	33	30	22	14	13	12	12	12	11	10	7
		43	38	37	36	35	33	29	22	13	12	12	11	11	10	9	7
		42	37	36	35	34	32	28	21	12	11	11	10	10	9	8	6
		41	36	36	35	33	31	28	21	11	10	10	10	9	9	8	6
		40	35	35	34	32	30	27	20	10	9	9	9	8	8	7	5
		39	35	34	33	32	30	26	20	09	8	8	8	8	7	6	5
		38	34	33	32	31	29	26	19	08	7	7	7	7	6	6	4
		37	33	32	31	30	28	25	19	07	7	7	6	6	6	5	4
		36	32	31	30	29	27	24	18	06	6	6	5	5	5	4	3
		35	31	30	30	29	27	24	18	05	5	5	5	4	4	4	3
		34	30	30	29	28	26	23	17	04	4	4	4	4	3	3	2
D		33	29	29	28	27	25	22	17	03	3	3	3	3	3	2	2
		32	28	28	27	26	24	22	16	02	2	2	2	2	2	2	1
		31	28	27	26	25	24	21	16	01	1	1	1	1	1	1	1
		30	27	26	25	24	23	20	15	00	0	0	0	0	0	0	0

FIGURE 59

Let's do two more quints on Figure 58 quickly now. We show 47 minutes left in the square next to Move 9 on Figure 58. This represents the status after ten moves.

After completing ten moves, the card, in the column under 30 and in the row with the 47 on the left, shows a 40 ("C" on Figure 59), consistent, as it should be, with the entry on Figure 58 across from Move 15. So 40 would become the entry in the parentheses at Move 15, if we were using the card to determine our time schedule.

After completing 15 moves, the card, in the column under 25 and in the row with the 35 on the left, shows a 28 ("D" on Figure 59), consistent, as it should be, with the entry on Figure 58 across from Move 20. Again the card can be used instead of the calculation we did earlier.

And so on for the other quints.

After completing 35 moves, with five moves, or one quint, left to play, the schedule would always show a zero in the parentheses to the right of Move 39. This is the reason there is no column under the heading 5 on the card. The flag must not have fallen, but no whole number of minutes need remain after completion of 40 moves.

So using the schedule card simplifies the "time record keeping."

You can make a schedule card by cutting out Figure 60 and folding it in half. You could give it some durability by making a "plastic sandwich" out of it. To do this, you need simply buy a package of "Clear Seal Laminating Sheets." These are self-sealing plastic sheets (made by Pres-a-ply, stock #43-035, available at stationery stores).

The card is small enough so that you can cover either the right or left half of your score sheet (even with the small USCF score books), or affix it with a

THE NEXT QUINT SCHEDULE CARD

	40	35	30	25	20	15	10		40	35	30	25	20	15	10
60	53	52	50	48	45	40	30	30	27	26	25	24	23	20	15
59	52	51	50	48	45	40	30	29	26	25	25	24	22	20	15
58	51	50	49	47	44	39	29	28	25	24	24	23	21	19	14
57	50	49	48	46	43	38	29	27	24	23	22	22	21	18	14
56	49	48	47	45	42	38	28	26	23	23	22	21	20	18	13
55	49	48	46	44	42	37	28	25	22	22	21	20	19	17	13
54	48	47	45	44	41	36	27	24	21	21	20	20	18	16	12
53	47	46	45	43	40	36	27	23	21	20	20	19	18	16	12
52	46	45	44	42	39	35	26	22	20	19	19	18	17	15	11
51	45	44	43	41	39	34	26	21	19	18	18	17	16	14	11
50	44	43	42	40	38	34	25	20	18	18	17	16	15	14	10
49	43	42	41	40	37	33	25	19	17	17	16	16	15	13	10
48	42	42	40	39	36	32	24	18	16	16	15	15	14	12	9
47	42	41	40	38	36	32	24	17	15	15	15	14	13	12	9
46	41	40	39	37	35	31	23	16	14	14	14	13	12	11	8
45	40	39	38	36	34	30	23	15	14	13	13	12	12	10	8
44	39	38	37	36	33	30	22	14	13	12	12	12	11	10	7
43	38	37	36	35	33	29	22	13	12	12	11	11	10	9	7
42	37	36	35	34	32	28	21	12	11	11	10	10	9	8	6
41	36	36	35	33	31	28	21	11	10	10	10	9	9	8	6
40	35	35	34	32	30	27	20	10	9	9	9	8	8	7	5
39	35	34	33	32	30	26	20	09	8	8	8	8	7	6	5
38	34	33	32	31	29	26	19	08	7	7	7	7	6	6	4
37	33	32	31	30	28	25	19	07	7	7	6	6	6	5	4
36	32	31	30	29	27	24	18	06	6	6	5	5	5	4	3
35	31	30	30	28	27	24	18	05	5	5	5	4	4	4	3
34	30	30	29	28	26	23	17	04	4	4	4	4	3	3	2
33	29	29	28	27	25	22	17	03	3	3	3	3	3	2	2
32	28	28	27	26	24	22	16	02	2	2	2	2	2	2	1
31	28	27	26	25	24	21	16	01	1	1	1	1	1	1	1
30	27	26	25	24	23	20	15	00	0	0	0	0	0	0	0

Figure 60

paper clip.

One word of caution. Technically speaking, such a schedule card can be interpreted as referring to notes, and therefore be deemed illegal. During the period that I was using such a card, I would briefly explain to my opponent before the game started that I use this card to schedule my moves, and that I presumed he had no problem with that. On the one occasion that my opponent objected, I simply didn't use it, although it did make me angry, and propelled me to play better chess. The *Official USCF Rules* state that "The use of notes made during the game as an aid to memory is also forbidden, aside from the actual recording of moves and the time on the clocks." Technically, then, a player who wants to nit pick, could object to the recording of the schedule

(as shown on line 5 on Figure 57), and to the recording of merits and demerits (as shown on line 6 of Figure 57). During the hundreds of games I've played, using this recording technique, no one has ever challenged it as being improper or illegal.

(ii) *Reward and punishment.*

You now have all the wonderful tools to give you a calibrated measure of how serious a **Time Pressure** transgressor you have been in any game, measured by the number of demerits you've accrued. You also have some ideas of the causes of **Time Pressure**.

Now, finally, how to correct it? Two approaches come to mind. One is enlightenment, and the other is a reward-and-punishment program.

By "enlightenment" is meant the standard idea of trying to sort out, to get to the bottom of, the causes of your **Time Pressure**, and then work on these to eliminate them.

There are two difficulties with this. First, the causes of **Time Pressure** are not clear. You've heard my explanations — the various possible psychological causes. Against that, you have the ideas of a giant like former World Champion Mikhail Botvinnik. So the gist of the first problem is that the root causes are not clear.

The second difficulty is that, even if you eventually recognize the problem, you have an extremely tough uphill battle to purge yourself of the offending attitude causing **Time Pressure**. This, incidentally, is true for me. I feel I established pretty firmly that the cause of my **Time Pressure** is that I'm a procrastinator; yet, even with that awareness for quite a few years, I made only a very modest inroad into reducing my **Time Pressure** problem.

Why reward and punishment?

A situation at my place of work, a company engaged in defense work, really made a deep impression on me.

In a facility of several thousand employees, security violations occurred at a certain weekly level — as would be expected. The bulk of these violations were in leaving a confidential document unattended on one's desk, found later by a security guard (each of us had a file cabinet which can be locked). The level of these violations was typically several per week.

In the 1980s, our level of violations became totally unacceptable to the government. A diligent attempt was made by management to heighten awareness of the problem with flyers of various colors, rallies, meetings, and so on, but these made only a small inroad into the level of violations, reducing them perhaps by 25 percent.

As the situation became more ominous and the company faced the possibility of being denied access to classified information in this facility, with the likely consequence of seriously crippling the competitive posture of the facility, and thereby the company, an internal punishment system was instituted. The person who committed a security violation had to take an immediate, unpaid absence of three working days. An unpaid absence is very much like a hefty fine, in that one's take-home pay for that month, or week, is seriously affected.

The disposition of these violations was relatively just, and rapid. Usually the person responsible was taking "his absence" within a day or two. The results were incredible. The weekly rate of security violations dropped like a stone — by a factor of at least ten-to-one, almost totally correcting the problem.

I concluded from this that punishment, meted out fairly and quickly, really works.

So reward-and-punishment is also a way out of **Time Pressure**.

The specific punishment.

This will sound weird, but let me give it to you straight. My punishment is to tear up and destroy one-dollar bills. Or, of course, other-denomination bills.

If you are a person of moderate income, you might decide to tear up (destroy) \$1 for one to five demerits, \$2 for six to ten demerits, and so on. Tearing up currency makes me angry. Angry for allowing myself to get into a situation where I must now tear up some hard-earned money.

You must be the judge about how much currency you should tear up. It must be enough so that you are angry about it, but it need not be a huge sum of money. I believe the steeper the penalty, and the more fairly it is administered (not excusing the penalty under special situations), the more dramatic will be the results.

But it is very important that you use a prearranged "tear-up fee schedule." If you tear up \$1 for every three demerits, and you are a typical wage earner, that is probably sufficient to quickly get you to stay on schedule.

A couple of related issues here. You can calibrate punishment to less than a dollar by purchasing stamps and tearing up the stamps. You may elect to tear up one first-class stamp per demerit at the end of the time control.

**I recommend
that you tear
up currency!!**

It is important that you accept your punishment promptly. Tear up the currency, or the stamps, somehow, immediately after the time control during which the **Time Pressure** demerits occurred. I suggest doing this

out of sight of people, simply because you're liable to get a lot of questions — mainly about your sanity — or funny looks from anyone who sees this activity.

For me, tearing up US currency really bothers me, much more so than tearing up stamps. I recommend that you tear up currency.

A subtle point here. You may say, "I'm not going to tear up money. I'll use that money and get something for my girlfriend," or wife, or boyfriend, or husband, whichever the case may be.

Although very laudable, this will not influence your chess, because most of us feel that we should be doing more for our girlfriend or boyfriend or our spouse. The **Time Pressure** problem will not get fixed.

If it bothers you that you're tearing up money instead of getting something for your girlfriend or your wife, then simply resolve to do both. You must tear up currency and spend some amount on your girlfriend. Again, you must tear up enough currency so that it has an impact on you.

The same argument goes for saying you'll give that money to your favorite charity or to stop hunger in the world. You cannot do these things *instead* of tearing up money. Again, if you feel guilty about not having donated enough to charity, you can resolve to donate one, two, ten, or whatever number of dollars to charity for every dollar you tear up, *on top* of the money you have to tear up.

So there you have it. The full fix to your **Time Pressure** problem.

A long-shot "Time Pressure" fix.

If you know that your **Time Pressure** problem is the result of being a procrastinator, there may be some other help for you.

There are several companies that make audio cassettes with subliminal messages on them. Mind

Communication, Inc, Box 904, Grand Rapids MI 49509, has a toll-free number (800) 237-1974. They have a tape called "Do it now!" for \$11, available with different types of background music. "Bright Images," produced by Escott Int'l, Inc, with the toll-free number (800) 433-2291, has a tape, "Stopping Procrastination," which is also identified by the number ISBN 0-944440-08-8. This tape is available at some bookstores for about \$13. Potentials Unlimited at 4808-H Broadmoor, S.E., Grand Rapids MI 49508, has a tape titled "Overcoming Procrastination," available at some bookstores for about \$10. "The Joe Land Co., Inc," Box 11156, Albuquerque NM 87192, has "Tape 1: Stopping Procrastination." \$35. Also, Success Education Institute Int'l, Box 90608, 2108 Garnet Ave., San Diego CA 92109-3602, has a toll-free telephone number — (800) 248-2737 — 24 hours a day. Their tape, "Stop Procrastination," is 40S or 40X depending on the format — \$15. Effective Learning Systems, Inc. at 5221 Industrial Blvd., Edina MN 55435, has Subliminal Tape OPR (\$11.98), "Overcoming Procrastination."

Now, I've been under the impression for a long time that I'm a procrastinator, and that this trait was largely responsible for my **Time Pressure**. Listening to an audio cassette titled "Stopping Procrastination" certainly had a marked impact on my day-to-day procrastination problems, and seems to have had an impact toward reducing **Time Pressure** for me. By the way, I've only listened to the tapes from the first three companies above.

A subliminal audio cassette on "eliminating procrastination" may reduce your time pressure problem.

You may want to try one of these tapes. Please remember that there is no guarantee that listening to

any of these tapes will reduce your **Time Pressure** problem.

Until you have solved your **Time Pressure** problem, if you ever had one, Time Management consists entirely of the pursuit of eliminating **Time Pressure**.

2. Improving allocation of extra time in critical positions.

In principle, the allocation of extra time for any move is very simple: if your **Time Pressure** score is positive — if you're ahead of schedule as of the last quint — you can use extra time on the move at hand. If you are "even," or behind — as in our example of Figure 58 starting at Move 16 — then the extra time you take on any move must be part of the quint you're playing. You must not let your guard down to allow yourself to miss the target time for the quint. Again, in our example of Figure 58, should you consider the position you're facing for your 17th move very difficult, you must nevertheless plan to meet the target of 28 minutes left at the end of 20 moves. If, however, you felt the position as you're reflecting on your seventh move to be very difficult, you may elect to miss the target of 49 minutes left at the end of ten moves (since you had a positive Time Pressure Score after the first quint).

The extra time you take on any move must not be borrowed from a future quint.

In essence, if you're ahead of schedule, you may use your "plus" time. If you're behind, you don't have the luxury. This is a powerful reason to get ahead of schedule in your game. It allows you the flex-

ibility of spending extra time when you need it.

To sort out which moves you should spend extra time on, and which ones to dispatch quickly, some

thoughts are offered next.

Let's start with the easiest issue, namely technically forced moves. A technically forced move is one where you have only one legal reply. If you are not particularly disturbed about being mated at the board — as compared to resigning the position before the inevitable mate — then you should immediately move when you recognize you have only one legal move. By “immediately” here, we mean within one second.

Why? Because there is absolutely nothing to be gained by reflecting any further on the move. You have no choice. *Move!*

If you have an aversion to being mated at the board, then, prior to moving, you want to establish that you cannot be mated on your opponent's next move. Does your opponent have a mate on the move? If so, you want to resign. This analysis should only take a few seconds.

There is absolutely no reason to look for a mate in two or more moves. You will have another opportunity to resign before you can possibly be mated.

There are various degrees of tactical complexity as we leave the technically forced move and cross over to more and more complex moves, possibly involving a piece sacrifice.

Many candidate moves have a short analysis tree. Typically, there is a very limited range of practical choices when your opponent has just captured one of your men. Usually you can conclude rapidly whether you must recapture, and if you must, you usually have a very limited choice — one or two, occasionally three, pieces.

So you should “gain time,” or play faster than the allocated time per move, on a certain number of moves with limited options. The time you save will

add to your merits, just like depositing money in the bank gives you some cushion against adversity.

This gained time can be used up on a few moves where you need to formulate, or reformulate, a plan, or where an especially complicated tactical situation exists. As explained above, however, this luxury exists only if your Time Pressure Score is positive. Let's say you just blundered, and your opponent has just won a pawn. Since this was not in your plan, the whole situation must be carefully reviewed. It is possible that the plan you were pursuing prior to the blunder is no longer practical. So here, a careful reevaluation is required. You may very well have a lost position and need to establish whether you must start a wild attack, or try to outplay your opponent from a lost position, or, possibly, resign. In any case, the situation is special and requires extra time.

D. Improving "on-line toughness."

Take a hard look at your game. If the position is hopeless, resign; if not, then play like the fate of the world depends on its outcome.

The author

Everyone can probably remember a game where he was not yet lost, but was disheartened, lazy, intimidated, or a combination of these, and played on — but just mechanically, just going through the motions — and lost the game.

But it should happen very rarely. Let's not quibble over what "very rarely" means, but certainly not more often than one game in 50. But if even one game in 50 is lost this way, while it should have had a 50-percent chance of being drawn with some "on-line toughness," it should be cause for concern.

From a rating point of view, this one game in 50

turns out to be small. If, in one game in 50, you lose, where in fact you should have had an even chance of drawing or losing, this only makes a four-point rating difference.

It's not the rating points you're throwing away that's bothersome. It's a certain lack of resolve, of spirit, of striving for the best move, that is likely to permeate your game, that'll convert a win into a draw occasionally, and a draw into a loss.

You may have an "on-line toughness" problem more severe — you may be throwing away more than one potential draw every 50 games. If so, your situation is all the more acute.

So what to do about this?

One weapon in your arsenal is to read and apply the quote at the beginning of this section. It commands you to decide, whenever doubt creeps into your mind, whether you feel the game can be saved or not. It is very important that you follow both pieces of advice in the quote, and not only the second. If you think you're lost (we'll talk about that more momentarily), resign. Don't play on. By playing on in a position you think is hopeless, you are tampering with your will in a future game when the result is not crystal clear. By playing on in this hopeless position, you may in a future game say to yourself, subconsciously, incorrectly: "What's the use, I always lose these kinds of positions!"

Let's agree that a lost position is one your opponent, with his specific skill level, will be able to win in virtually every case.

Another weapon against quitting — the half hearted, feeble play in a difficult position — is to realize that by quitting you don't pick up the pieces another day where you left off. An example might be useful. Your *Strength* is 1700 and you're playing an opponent of the same strength. You sense you're not

playing well, and your opponent has you in a bind. Your resolve is melting, and you're having a tough time concentrating on finding a way out of your predicament. So you do the following thought experiment. Pretend you're a grandmaster who has to assess this position to set up some "bookie odds." He only knows the position, whose move it is, and your rating (and your opponent's rating). He can't crawl into your head and take into account your present attitude of near despair. He might assess the position as a plus-over-minus (your opponent has the upper hand), with an even chance for a draw or a win for your opponent. Statistically, this means that if there were two similar games like this back-to-back, you should draw one and lose one, losing a total of 16 points, or, averaging it — you should lose eight points each game. If you "cave in" and lose your resolve and the game without a real opportunity for a draw, you have thrown away eight rating points — you'll wind up with a 1684 instead of a crapshoot split between 1700 (if you draw) or 1684 (if you lose), which is the equivalent of a 1692.

Returning now to your "real self," you may want to remind yourself that quitting will cost you eight points, and that you might have to win two games against lower-rated players to make up for this "luxury of quitting." The reason we're talking about lower-rated players is that the Swiss system of tournaments, which is widely used, will usually cause you to be paired, should you lose, with a lower-rated player than if you drew.

One consideration that may help, when you're on the ropes in a game, is visualizing a baseball relief pitcher being called in while his team is behind in score and the opponents have men on base. The relief pitcher has figured out how to deal with this circumstance — so can you.

Another suggestion is that you make a conscious decision before you play, before you consent to be paired for that game, that you're going to hang tough for the whole game and not be a quitter. The strong recommendation here is that, if you can't decide in your heart that you're going to play like a tiger for the entire game — no matter how tough it looks — then you withdraw from that round. This is far better than taking a chance that you're going to play halfheartedly in a type of position where all you have is dogged defense. If you're at all like me, and really love to play, then this is a heavy price to pay, and should propel you to think positively about our intentions.

So extend your thinking this way. Don't enter the tournament unless you have a mental blueprint about hanging tough in every game. Think ahead, as you would for a combination, and pretend that you have lost to two of the lower-rated players in a row, and are now in a bad way in an unfamiliar position in the next game. How do you feel? Have you got the resolve to play hard — to "take it to your opponent" — to look hard for a plan out of your bad position? In other words, prepare yourself for this eventuality now, before entering the tournament. If the answer to the last question is no — or even maybe — think about not entering the tournament. You need to work on your attitude before allowing yourself the luxury of playing in a tournament.

Don't enter a tournament unless you have a mental blueprint about hanging tough in every game.

Think this through, and you'll surely agree.

Should you feel that you're occasionally "giving up in the middle of the game," here's one more suggestion. Have a friend or a teacher, again preferably a stronger player, review your games with you.

You may ask him to see if he spots signs that you're not trying hard enough, which, if true, represents an important piece of information for you, and a good point of departure from which to work.

If you are guilty of not trying hard enough, you may decide to abstain from playing for a while, maybe a week, a month, or some suitable time period, to ponder the situation, to evaluate it, to think about remedial action.

One more thought. I had, to a limited degree, this "quitting problem," and simply resolved to pull myself together and stop doing it. To a large degree, this has worked. On the other hand, such a simplistic approach does not work for everyone.

E. Improving physical fitness.

Take care of the house your brain lives in.

Ancient saying

Imagine a high school student training for the one-mile running event, with a specific "time objective" by graduation, and an objective even better by the end of his college career. Now, if he's serious about this, wouldn't you be extremely surprised if he smoked cigarettes, or if he were careless about his eating habits and let his weight creep up? Wouldn't you think — if he did either of these things — that they were proof that he doesn't really care how well he does in the one-mile race?

You would be right, since abusing one's body — by smoking cigarettes or becoming overweight — directly conflicts with the objective of running a fast mile, even if this person trained diligently every day.

In chess, there is great similarity; but the effects of physical fitness, or rather the lack of physical fitness, are much more subtle, and the results much

harder to pin down.

We know by now that one should play each game with a plan. There are many good books on the subject — *Judgment and Planning in Chess* by Euwe and Kramer and *Think Like a Grandmaster* by Kotov. Before reading on, however, ponder this question: if you should play a game with a plan, shouldn't your chess career and chess objectives have a long-range plan?

It would seem so.

The first and painfully obvious priority in working out a long-range plan is that you must be alive, and more than that, you must be physically well for the entire plan. You must not just have a life expectancy, but a “wellness expectancy” that spans your long-range plan.

Playing good chess requires a mental alertness, which, in turn, requires a physical wellness, a physical fitness. So, being able to realize a plan of chess improvement in the “out years,” the future years, requires a foundation of at least reasonable health, and very preferably, good health.

But for physical fitness in chess, a short-term physical fitness and a long-range physical fitness come to mind. The short-term physical fitness is primarily an issue for the game today, while the long-term physical fitness deals with insuring fitness at a point in the future. Let's address these in turn.

1. Short-term physical fitness.

There is an obvious dimension to this, but also a more subtle dimension. Let's look at them both.

- a. The obvious dimension of “today's game” physical fitness.

Coming to a game exhausted after a late night out on the town would compromise your alertness, to say the least. Alekhine showed up drunk for one game in his first match with Max Euwe for the World Championship, and, in fact, castled into mate in that game.

During any individual game, you would like your physical condition to be such that fatigue will not become a negative factor toward the latter hours of the game.

Former World Chess Champion Mikhail Botvinnik wrote in *Fifteen Games and Their Stories* how he would retire early in the evening in order to get a good rest before the next day's game, while the other players in the tournament would socialize and frolic much later in the evening.

This advice is not meant to be an absolute rule. Some players need to relax and unwind from a game for their mental well-being. Also, Botvinnik has iron discipline.

Another former World Chess Champion, Boris Spassky, explained in a lecture preceding a simultaneous exhibition (sponsored by the Billerica Mass Chess Club in 1986) about proper match preparation. To my surprise, he concentrated heavily on the "proper rest-physical fitness" dimension of this preparation. It is well known that the current World Champion, Gary Kasparov, takes much pride and energy in staying fit.

- b. The subtle dimension of "today's game" physical fitness.

There is a simple, specific, nutritional situation you should be aware of, which has an important influence on your *Strength* during a game. During times when the blood sugar level is low, one becomes

tired, as well as less “smart,” both directly tying into *Strength*. The medical term is hypoglycemic, but let’s not worry about the fancy words. It has nothing to do with being sick or diabetic. There are two ways that this condition can develop during a chess game. The first is that one gets hungry. Some time after a meal, the blood sugar level starts to subside, signaling hunger. The side effects are fatigue and reduction of mental alertness. So you must be aware that during a long game, without any nourishment, this low blood sugar condition can, and in fact will, set in. The other way this condition can develop is more subtle. Often, when hungry, a person will eat a candy bar or a donut as a quick “pick-me-up.” An hour later, the blood sugar level has come right back down again, and usually to a lower level than it would have been had the person not eaten the candy bar at all.

There is an interesting explanation for this. The body was designed to assimilate food, which also happens to raise the blood sugar level; should it become too high, the body dispenses insulin (the pancreas does this) to bring the blood sugar level back down. Over the hundreds of thousands of years that man has been around, fruit, vegetables, and some meat have been the source of food, and the body does an excellent job of keeping the blood sugar level steady with these kinds of nourishment.

During modern times, with the advent of sweets, we can consume sugar in concentrated forms (donuts, candy bars, ice cream, frappes, and so on). There hasn’t been enough time in our evolutionary history for the body to adapt to these new kinds of concentrated sugars, also known as simple carbohydrates (fruits and breads are mainly complex carbohydrates). So, when one eats a candy bar, the body soon overreacts. The pancreas puts out more insulin than it should. A possible explanation for this is that

the body “thinks” that huge amounts of foods have been consumed, because, throughout history, this large amount of sugar could only come from huge amounts of food. The result is that the blood sugar level is brought down lower (this typically takes place within an hour) than it should be. You get more tired and mentally sluggish than you would have been without the candy bar.

So the advice is simple. After several hours in a chess game, eat something the nutritional value of which is primarily complex carbs (carbohydrates) — fruit such as a banana, an apple, or a pear, or some bread or bagel without jelly. Avoid the foods containing simple carbohydrates mentioned a couple of paragraphs back. I was unaware of this until relatively recently, and paid the price several times by getting mentally dull in a game after eating a couple of donuts.

2. Long-term physical fitness.

Your long-range chess plan requires reasonably good health “in the future.” So let’s concentrate on how we can do this.

Let’s try to put this in a positive perspective. Seven key things come to mind, starting with the most important, at least in my view.

- ① *Stay drug free.*
- ② *Use alcohol modestly or not at all.*
- ③ *Be a NON-smoker.*
- ④ *Stay physically lean.*
- ⑤ *Exercise moderately.*
- ⑥ *Avoid serious stress.*
- ⑦ *Practice good nutrition.*

We’ll now talk briefly about each of these.

Stay drug free.

Say NO to cocaine, crack, heroine, and all other non-prescribed drugs.

Two things about drugs you may not have reflected on.

The desire for excellence.

It's the cornerstone for the improvement in chess — and is eroded by drug use. This has to be the most serious setback to chess improvement of any health issue, because it attacks the foundation, the driving force, behind your improvement in *Strength*.

Who needs a "rush" every three hours?

Nature has been fine-tuning your body for a hundred thousand years, or for a million years, or for a thousand million years, depending on how you want to keep score. Among other things, it has seen fit to give you a sense of pain for your survival, and to make you feel tired at the end of the day in order to propel you to take some rest. If you would be better off, more happy, or better able to survive if you experienced some "rush" every several hours, nature would, after all these years, have provided you with one. Remember the sage advice: if it ain't broke, don't fix it!

Use alcohol modestly or not at all.

Modest use of alcohol is fine. Heavier use, similar to drugs, de-focuses the user from other endeavors, one of which is the desire to improve *Strength*. Alexander Alekhine, in his first match with Max Euwe for the World Championship, lost a number of games, including one where he castled into mate, because he played in a drunken state. Alekhine, later

giving up alcohol, won the World Championship in his second match with Euwe. The negative impact on health, entirely separate from the de-focusing issue, should be sufficient to keep one from abusing alcohol.

Be a NON-smoker.

There have been many studies in recent years linking various serious health implications to smoking cigarettes. There is no need to plow this field again.

There is one personal experience that may be of help to you. Back in the early 1960s, I was smoking about a pack and a half a day. I decided to cut down to one cigarette a day. Why not enjoy the benefits of smoking without the serious risk associated with it? I did, but over a period of a year, crept back up slowly to my pack and a half a day. I subsequently quit entirely. I consider myself a reasonably disciplined person, and feel now that cutting down (and staying at a low consumption level) is extremely difficult. Only the most disciplined people can accomplish this.

So: be a NON-smoker!

Stay physically lean.

Excess weight stresses the heart, and the body signals its desire for rest by causing fatigue more quickly than in a person of moderate weight. Reducing your weight has the short-term benefit of reducing the frequency of blunders occurring in the later hours of a playing session, and the long-term benefit of improving your chances of being in good health to pursue your chess objectives 10, 20, or 50 years down the road.

This section, as well as the sections below on exercise and nutrition, is covered well in Jane Fonda's video cassette: "Jane Fonda's Workout-Lean Routine." ISBN-0-7907-0012-3. She has an excellent, simple explanation for exercise, weight control, and nutrition in this video.

Exercise moderately.

Exercise tends to moderate appetite, which makes it easier to keep a reasonable weight, along with the fact that it burns calories. There are various books out on this subject. I became fascinated with Kenneth Cooper's book *Aerobics*. Any of Cooper's books on the subject will do (*Aerobics*, *Aerobics for Women*, *The Aerobics Way*, or *The New Aerobics*), the principles of which I've used fairly religiously for decades. Vigorous aerobic exercises — running, swimming, biking, and so on — are directed primarily at exercising your heart and keeping it healthy. Since the heart is the "long pole in the tent," the part of the body most likely to fail, aerobic exercise makes good sense.

But vigorous aerobic exercises are not necessary, and normal aerobic exercise such as brisk walking is fine too, in that you obtain most of the health benefits you would obtain from the more vigorous exercises, and walking, incidentally, is also covered in Cooper's books.

Learn about stress.

Stress is *our reaction* to external "stressors" in the environment. It compromises health, and is implicated as a serious factor in heart attacks. In an indirect sense, it affects *Strength*. An argument you just had with someone you love causes stress, and will

affect your concentration in the game.

Playing chess can cause stress, and, as a matter of fact, a chessplayer I know who had heart bypass surgery was told not to play any more chess because of the stress factor. He didn't obey, suggesting that if he couldn't play anymore, the surgeon should have put him out of his misery. So I'm talking about all stress "outside the game."

Stress is such a popular current topic that virtually every bookstore has a section devoted to it. All libraries have books on stress. For your *Strength*, it makes sense to understand stress.

So learn about stress, and work at reducing it. Aside from improving your health and well-being, it will improve your chess.

Learn and practice good nutrition.

Good nutrition will increase your chances of being healthy and alive in the "out years," which you need to realize your chess career plan. Your ability to think clearly and quickly are tied to your body's ability to provide oxygen to the brain at a rapid rate, and this in turn is linked, at least in part, to the quality of nutrition.

This book is not the place to get into any details about nutrition, but again there are sections in every bookstore about diets and nutrition. Should you not have a favorite, Nathaniel Pritiken's *The Pritiken Program for Diet and Exercise* is an excellent nutrition prescription to follow. Also, a recent book following a similar prescription as Pritiken's books is *The T-Factor Diet* by Katahn, published by Norton and Co. This book is summarized in an article in the October 1989 issue of *Reader's Digest*, titled, "Diet the T-Factor Way."

Here again, Jane Fonda's video (mentioned nine

paragraphs back) gives you a concentrated, excellent, simple exposition of good nutrition.

Should you not be clearly aware of the foods recommended for good nutrition, you will be pleasantly surprised that following good nutrition is less expensive than the typical American diet.

Summarizing, physical fitness is an indirect, but important, ingredient of *Strength*, and its pursuit is, in some ways, as important as the studying and other training you are doing to improve your *Strength*.

F. Personality influences.

1. Reckless vs. overcautious play.

Some players are overcautious — in that they virtually never make a sacrifice. By “sacrifice” is meant surrendering material (or accepting a positional disadvantage) willingly without being able to calculate far enough in advance to be sure to recover this material. These players do it far less than other players of similar *Strength*. The reverse, namely, being reckless — sacrificing material too often — occurs also, of course.

These characteristics of playing are the result more of personality features than of technical foundations.

There are two ways in which overcautious chess playing shows up. In certain positions, a pawn sac, although called for by the position, doesn’t even occur to us. But here, the point is not that the pawn sac is beyond our capability to comprehend — beyond our *Analysis Horizon*. Often in an annotated grandmaster game, we might run across a similarly “deep” pawn sac and would immediately recognize it as a great idea. The pawn sac, or other sacrifice, doesn’t occur to us because our thinking is restricted

to considering only sound, non-reckless, moves.

The other way the overcautious attitude shows up is that even if we think of the sac, and then evaluate it, we would say, “Yeah I’m getting some space, ...” or “Yeah, I’m getting an attack, ...” or “Yeah, I’m activating my pieces, but it’s not worth a pawn,” or “... it’s not worth the exchange.”

There are two specific remedial approaches you can take.

a) You go over your games with a friend, a mentor, or a teacher. This is useful even if this person is not a stronger player than you. Even at the same *Strength*, he may say — what about this sac? After jointly evaluating its merits, you want to make a mental note, or even a written note, answering the question: “Did I even *consider* this move, and if so, why did I then reject it?”

b) We can study annotated grandmaster games and see what sort of compensation — in the form of space, attack, mobility, restriction of the opponent’s forces — they get for their pawn sac, or the sac of the exchange.

Let’s say the grandmaster obtained a space advantage for a pawn. We — not being a grandmaster — might say, “Yes, but a grandmaster can do more with a certain space advantage than I could! Therefore I’d better get more compensation for that pawn than the grandmaster did.”

Not true! You may not get as much benefit out of a certain space advantage as the grandmaster does, but your opponent — let’s say at roughly the same *Strength* as you — will also not get as much benefit out of the material you’ve offered — the pawn — as the opponent of the grandmaster — also presumed to be a grandmaster — gets.

In studying these grandmaster games with sacrifices, we will start to appreciate the circumstances

under which a sac is legitimate.

A player making sacrifices too cavalierly is doing the opposite of what we've been covering here. He is willing to accept too little compensation for a sacrifice. The same program as explained above, in reverse, is applicable for the reckless player.

The reckless-vs.-overcautious attitude reflects in ways other than the frequency with which material is sacrificed.

In a difficult situation, there is a fine point — based on the hopelessness of the position — where one should abandon dogged, passive defense and play for complications. This, of course, is the logic behind pulling a goalie in hockey, when time is short and the team is a goal behind, thereby increasing the number of “forwards” in the game. The overall chance that a goal will be scored increases, the chance that the team pulling the goalie will score increases, although the price for all this is that the opposing team's chance of scoring also increases, and much more so than the team pulling the goalie. But the risk is worth it when the time is very short and the team is one goal behind.

If you start to play for complications “too early,” while it still makes sense to the average player of your *Strength* to defend doggedly, then you are too reckless. On the other hand, if you wait too long, you are overcautious, with the penalty that it is usually too late to create any complications.

The point in this section is not to determine the reasonableness of making a sacrifice, or starting to play for complications, but to explain that these preferences are usually tied in with your personality.

**Preferences of style—
from sacrificial to positional trench warfare
are usually tied to your
personality.**

By studying and understanding the appropriate thresholds for various types of sacrifices, and becoming comfortable with them, you can start to edge away from either overcaution or recklessness.

2. Other faulty special preferences.

We've touched on certain psychological preferences in Part II that result in some distorted perspectives in chess. The previous section was an example of this. Being too cautious or too reckless — and again, relative to the average of all the players of your approximate *Strength* — is one of these faulty preferences.

Outside chess, some people are spenders while others tend to be savers. A spender will use his money — or credit — now, in preference to having it, plus interest, later.

Let's say a player gives up something permanent, a pawn, perhaps, in exchange for greater space and mobility, in such a way that the general consensus of grandmasters would be that *the player has full compensation for his sacrifice*.

Now, the player who is a saver in the “non-chess world” is more likely to prefer to be the side having the permanent advantage, whereas the spender would prefer to be the side having the space-and-mobility advantage. This is human nature and understandable.

An example is this: In Kotov's book titled *Alexander Alekhine*, Batsford 1975, he explains that in Alekhine–Asztalos, Figure 61 is reached after 1. Nf3 d5 2. c4 e6 3. d4 Nf6 4. Bg5 h6.

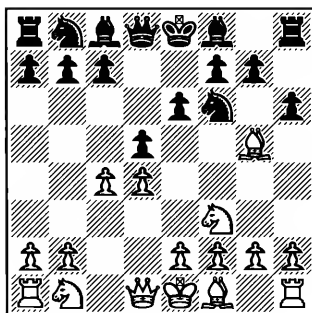


Figure 61–White to move

When Alekhine played 5. *Bxf6* Kotov explains that White gains a significant amount of space and a domination of the center after 5... *Qxf6* 6. *Nc3* 6. *Qb3*, which is more important than Black's possession of the two Bishops. Although, according to Alekhine, objectively White is slightly better after his fifth move, not all the savers would prefer White, even though they might be aware of Alekhine's rationale, while all of the spenders would prefer White.

A problem arises when a saver will not even consider 5. *Bxf6*, or when a spender, playing the black pieces, hesitates to play 4... *h6* for fear of the continuation 5. *Bxf6*.

The underlying saver/spender mentality is deliberately overstated, but the point is that there are personal preferences outside the game that have important influences in chess. The issue discussed in the previous section — reckless vs. overcautious play — is likely to be related to this off-board preference (spender/saver).

Yet another issue possibly related to an off-board preference is “capturing with the cheapest piece,” with an example given in Chapter 1 (Figure 14).

If you generate Flash Cards in the way we described in Chapter 4, and accumulate and categorize

these, you will, similar to our “Stalking the grand themes” section, find these themes repeating if you have one of these types of faulty preferences. This is the important first step, namely, identifying the particular false preference. Once you’ve become aware of one of these, you should do two things to purge yourself of this problem.

First, keep Flash Cards on these problems, which, when looked at often enough, will eventually start to stick; and second, study annotated grandmaster games where the proper choices were made — choices like giving up the Bishop pair for a Bishop and Knight in return for a space advantage — and convince yourself that your preference, at least in this case, is wrong.

CHAPTER EIGHT

THE LONG-RANGE PLAN

I hope today is the tomorrow you planned yesterday.

The author

A long-range chess plan serves as a framework for our chess journey through life, for our chess career. You've probably read in many a place that you should play each game with a plan — we've touched on that before.

A. Why a long-range plan?

If you know you play your endings weakly, you might plan to work on your endings. Why dissipate your energy creating detailed long-range plans?

To understand the need for a long-range plan, we'll briefly revisit "the Soltis curve" — the chess truth discovered by Grandmaster Andy Soltis that we talked about earlier — which tells us that most chessplayers don't improve significantly after about eight years of serious play.

"Most chess players don't improve significantly after about eight years of serious play."

GM Andy Soltis

In my view, a combination of four factors conspires to create “the Soltis curve.” These are:

- a) We really don’t know what’s wrong with our game;
- b) We don’t honestly look for what’s wrong with our game;
- c) We construct our “chess improvement program” from preconceived notions;
- d) When we do know what needs to be done, to be studied or analyzed, we often don’t do it because it’s hard work.

These four major reasons limit our progress once we have reached a somewhat enlightened level of strength.

A pretty strong indictment.

Let’s get into some details of the long-range plan.

B. Long-range plan details.

To have a useful long-range plan, four ideas present themselves.

First is a method to obtain the status of our *Strength* that has more detail than the single number which is our rating. Incidentally, I feel that the rating — the US Chess Federation rating — is a reasonable reflection of our total *Strength*.

Second is the identification of long-range goals one year, five years, ten years down the road relative to that detailed assessment, relative to that status.

We often don’t do what we need to do because it’s hard work.

Third is a method of achieving these goals; a specific study plan, probably coupled with a playing schedule at a club, and maybe a tournament schedule.

Fourth is periodic monitoring, which is the repetition of the first item, namely, the determination of the current status of the detailed breakdown of one's *Strength* ingredients.

The status is really an evaluation of the Components of Chess Capability. So, for each of the CCC, we would, at least in principle, have a method of determining the degree of its development, or its quality.

In the ideal case, for each CCC, there is some quantitative measure for each 100-point increment in rating. A person with a 1700 US Chess Federation rating has some average expertise in any specific CCC. He might have a 50-percent recall for any move in one of 30 different opening lines that he's learned.

In chess, I believe one cannot, realistically, set ambitious goals far into the future. One cannot state as a goal to improve 400 rating points in five years, or ten years, or even twenty years. Similarly, one cannot project winning certain tournaments far beyond one's present capability. As identified throughout this book, I feel improvement in strength is similar to hacking one's way through a jungle a hundred years ago. A continuous reassessment needs to be made, based on the obstacles encountered. In chess one cannot brute force one's way to greater strength but must make modest steps in improvement and then try to consolidate these. The Flash Card route is a manifestation of this progress.

So the long range goals can simply be to monitor, understand, and possibly document one's progress each year, coupled with an objective for the following year.

Below are set forth the different CCC, and the evaluation criteria. For the CCC identified below, a method, or process, to improve is usually identified.

Finally, for each CCC, we'll identify an objective, say a year hence.

1. Images.

a. Openings.

Status:

Identify each opening line you're willing to include in the test. There might be 50. Select at random one of the first ten. The test is for Moves 4 to 13. Play out the opening on a chessboard, guessing your own color's move for each of the ten moves (after you have played the "correct" move for your side, just read the opponent's move and play it). You will have a certain number of moves right. Repeat the procedure for every tenth opening sheet. For the sake of score keeping in the future, your openings rating or goodness will be the number of total opening sheets you included in the test (not the number you tested, which is ten times fewer) times the percentage of moves you guessed correctly.

Method:

Promise yourself you're going to develop a certain number of these lines each month. Also identify your goals for one year.

Your objective might be three lines a month, or 30 a year (other priorities in life might forestall your plan during a couple of months).

b. Middlegame.

Status:

Play three games of Solitaire, using a clock and giving yourself three minutes a move. Keep track of the percentage of moves you guessed correctly from

Move 13 to Move 24. The number of “middlegame *Images*” you have are correlated to the percentage you will score on this test.

Method:

It’s important to note that you will not achieve a higher percentage of correct moves over the following year simply by willing it to be so. So the middlegame strategy and tactics need to be studied, for which there are various good texts.

By playing Solitaire games, and really studying the annotations to the games, and then generating Flash Cards where appropriate, new *Images* are developed.

Identify goals for one year.

Your plan is to improve your percentage of correct answers. A small increase in the percentage of correct guesses or correct move selections represents a substantial improvement in the number of *Images* and your understanding of the middlegame.

c. Endings.

The same thing can be done as directly above, except choosing games that last at least 60 moves, doing the test for Moves 49 through 60. Usually, by Move 48 the game has progressed into the endgame.

2. APROP.

a. General.

Status:

Select a diagram early in a game from virtually any chess book with games in it, where most of the men are still on the board. Set up the board with this position. It is more convenient to use a source where the entire score is given together, such as Robert

Byrne's column every Tuesday in the *New York Times*, or the tournament books for 1922, and the 1924 tournament in New York, annotated by Alekhine.

Now, start a clock and follow the game mentally for a few moves — starting from this position, three moves by each side, or six ply — without moving the pieces, and record the position with the symbols you learned earlier. Stop the clock. Now play through those same moves on the chessboard where the position is set up. Compare. The number of ply you mentally followed, the time you used, adjusted for the number of pieces incorrectly located at the end of the sequence, is a rough measure of your “general **APROP.**”

Method:

Plan to do a certain number of these a week.

Identify goals for one year.

You might plan to do 40 times as many during the year as you have for the week.

b. Combinations.

Status:

Obtain a set of problem combinations. Could be Reinfeld's *1001 Winning Chess Sacrifices and Combinations*, or one of the nine diagram chess quizzes near the beginning of each issue of *Chess Life*, or the set of combinations near the end of each *Informant*. Naturally, all of these combinations are not equally difficult; so it would be wise to select a set that you can handle, yet is not trivial for you. Do half a dozen. Record the elapsed time for each, the accuracy, and the source of the problem set. Years later, it's important to remember whether the test was from the “Reinfeld” book or the “*Informant*.” Set up a series of tests for 20 years, so that you keep a “permanent

reference.”

Method:

Plan to do a certain number every week. Whenever you take inordinately long to obtain the answer, or if you solve the combination incorrectly, review the solution and determine, as we did in the section on Flash Card generation, if there is a missing or a flawed *Image*, and if so, develop a Flash Card. You should record the time you took and the quality or accuracy of your answer. This performance serves as the point of reference for the future.

Identify goals for one year.

Again, the goal for the year can simply be 40 or 50 times the goal for the week.

c. Platform analysis.

Status:

Use, in the back of an *Informant*, the set of combinations problems. In each case, look up the first two (or maybe just the first) ply of the answer. Knowing these first two ply, solve the problem. The idea is that you will start your analysis from a “platform,” from a position “downstream” in the game from the diagrammed position.

Get used to a point of reference by doing timed testing.

Again, you must record the time you took and the quality or accuracy of your answer. This performance serves as the point of reference for the future.

Method and goals for one year:

Do a certain number each week, and plan to do a certain number for the year.

3. Personality.

a. Objectivity.

Status:

Take several of your recent games, and, for the position at the end of ten, 20, and 30 moves, assess your position as =, \pm , $\bar{\mp}$, \pm , \mp , $+-$, or $-+$. Then have a master (or player much stronger than you) evaluate all these positions “correctly.” To the extent that you overestimate (or underestimate) your position, on average, you are not being totally objective.

Method and goals for one year:

This issue needs to be addressed only rarely, at most once a year.

b. Caution-recklessness.

Status:

Play over your last 20 games. Count the number of sacrifices you made. Record whether it was at least a pawn. Do not include pseudo-sacs, or sham sacs, which are temporary sacrifices where you can actually calculate to a point where you get your material back — and often more. (By the way, it’s excellent that you *have* perpetrated sham sacs, and is a good indication of **APROP**, but has nothing to do with personality.) Since a table describing the frequency of sacrifices for each rating level is not available, the recommendation is to review your “sacrifice frequency” with a stronger player.

Method:

If you assess your caution/recklessness ratio to be too cautious, you might set up a similar program as for **Time Pressure** to force yourself to take some additional risks. It could work along the following lines. You assess each game as to whether you sacri-

ficed or not. Then you give yourself +10 points, or some other number you might consider more appropriate, if you did, and -1 if you didn't. You limit your "plus" score to +12 (let's say). As you hit a certain negative score, say -10, you "reset" to zero and tear up some currency. With the experience of the **Time Pressure** remedial system, you can work out the details for this one as well.

Identify goals for one year.

You can set a goal that more nearly reflects the risk that grandmasters take. I'm guessing that, on average, a pawn (or more) is sacrificed at least once every three games. So, if you haven't been taking enough risks, you may set a target of one sac per ten games as an interim to reach in one year, or in two.

c. Toughness.

Status/Method/Identify goals for one year:

No good test for this characteristic has occurred to me. Since "wimping out," or stopping to really work hard in a game, is, for most people, a rare event, it isn't easy to detect by a "technical test." The only idea that's come to mind is this: in the test under objectivity, you now know the correct evaluations of some positions — a master or much stronger player has looked at these. Now post the game results for these positions. For those games where, at 20 moves, you have a \pm , corresponding to the upper hand, you should draw half the games and win half (or maybe draw 60% and win 40%). If it turns out that your results are considerably poorer than this, it could be poor endgame technique, or a lack of toughness.

But a much better way of tracking a problem like "toughness" is by being aware of your moods and feelings. If you're "tuned in," you will know when you're giving up or not fighting hard.

d. Fitness.

Status:

You will develop a number for F , for fitness, by evaluating the expression $F=4-W-H-B-C-D-S$, where we'll now identify how to obtain values for W , H , B , C , D , and S .

W is the ratio (it should be one) of your actual body weight divided by the ideal weight for your height and sex. H is your resting heart rate (in beats per minute after sitting quietly for five minutes) divided by 62. B is your diastolic blood pressure (the lower of the two blood pressure numbers) divided by 75. (If you can't get your blood pressure conveniently, just use 1.0 for B in the equation.) To get C , you multiply the number of cigarettes you smoke, on average, each day, by the amount of tar in one cigarette in mg. (the number is always given in mg. of tar), and divide this answer by 750. D is the number of drinks (or 12-oz. bottles of beer) that you consume each week, subtract three, and divide the result by 100. S is simply the lower of the two numbers C or D .

Ideally, the formula for F gives the answer "1", if W , H , and B are all 1, and the rest, namely C , D , and S , are all zero. In case you're curious, S is my code for sin, and simply refers to the fact that smoking and drinking combined reduces fitness and health more than adding up the effects of each of the two factors separately.

**"S" is my code
for "sin."**

The answer 0.9 to 1.1 for F is good, higher is better, and lower is worse. At 0.75 or lower, I believe your "wellness expectancy," the number of years downstream that you will be well enough to pursue chess and chess study vigorously, is limited.

If you're wondering why you don't get credit for

your exercise program, you can be sure you do. The more you exercise, the lower will be the values for W , H , and B , and the better (higher) will be your fitness answer.

Should your diastolic blood pressure—the lower of the two numbers, be 95 or higher, regardless of your total fitness F in the formula, you have a health risk (stroke, etc.) and should see a doctor.

4. Move selection Method

I have, to date, not generated a long-range plan to improve the Move selection Method. To round out the long-range plan, I hope you can use the ideas from Chapter 6 to help forge a long-range improvement plan.

5. Genetic Factors

Certain components of chess strength, such as mental clock rate, are largely genetic in origin. Those portions of our features which are genetic, can not be improved with a long-range plan by definition, since we have no way of changing our genetic code (at least not at the time this book is going to press).

•

AFTERWORD

I believe the thoughts in this book, properly applied, will improve your game, more so than if you used the “same amount of time” in your usual way.

I’d like to offer one more thought.

I’m confident this call is unnecessary for you, but should I be wrong, please consider it carefully.

I’ve seen chessplayers ridicule, embarrass, or otherwise make fun of weaker players. They feel that their good fortune, or maybe even their hard work, gives them the right to put down another person or have fun at someone else’s expense.

I feel that this is tasteless humor, really crude propaganda, similar to racial or religious prejudice and bigotry. It usually is the handiwork of people with low self-esteem.

By the way, I’ve done this on occasion myself, and regret it now.

Be proud of your ability, your progress, and you can feel good about yourself. You’re learning to deal better with losing — and therefore with adversity in life. Stand tall, but remember: you’ll never be taller by pushing someone else down.

Enough said — *bon voyage!*

Rolf Wetzell
April 1994

APPENDIX I

IDEAS FOR SCIENTIFIC STUDY

A. Can Mental Clock Rate be improved?

1. Thesis and Objective.

Let's define a person's Information Tracking Rate as the maximum rate, the maximum mechanical click rate, that he can accurately count. The sound track that a mechanical stopwatch makes comes to mind, as a measure of establishing this click rate.

This maximum mechanical click rate can be established (Section 2.a.). The thesis then is that a person can track a higher click rate for a short period of time. Through repeated and prolonged exposure, or practice, he can eventually track a higher click rate. He can develop a higher Information Tracking Rate.

2. Method of the experiment or test.

A timing device must first be designed and built that would feature an audible click rate, in clicks per second, similar to the ticking of a mechanical movement stopwatch, which is adjustable by the operator. The click rate might have a range from two clicks per second to 30 clicks per second. The clicking can be started and stopped, like a stopwatch, with the number of clicks, M , displayed. The click rate selected is displayed, as well as the total time in seconds, T , since the counting began.

a. The reference portion of the experiment.

The experimenter sets the click rate to the minimum, starts the device, counts mentally for 200 clicks — without looking at the display at any time — and then stops the timer. If he has correctly counted — if the display *M* is reading 200 clicks (or within a count or two) — he repeats the test at higher and higher rates until he can no longer keep track; he can no longer determine accurately this rate. The highest rate at which he did, however, we will call his initial, or reference, Information Tracking Rate.

b. The learning portion of the experiment.

The person being tested sets the click rate near his reference Information Tracking Rate. Partially through the 200 counts, he increases the click rate, with his hands “on the throttle.” By straining his mental faculties, he keeps up with the count. As he tires, he goes back to his reference click rate.

If he stops the timer when he thinks he has heard 200 clicks, and *M* is in fact near 200, then during this trial he has achieved a “performance Information Tracking Rate” of 200 divided by *T*, where *T* is the number of seconds of the trial.

This exercise can be used as the cornerstone for various and repeated testing.

By practicing in this manner, a person may achieve a repeatable performance Information Tracking Rate that may be significantly higher than his reference Information Tracking Rate. This assertion can be confirmed or repudiated by the above test.

This procedure can be used to determine if the Information Tracking Rate can be improved.

A natural question that would follow success in

the above endeavor is whether this higher Information Tracking Rate stays with a person, or, if, as one would suspect, the Information Tracking Rate would slowly drift back over the months to its old reference. If so, periodic “refresher Information Tracking Rate exercises” to maintain the higher Information Tracking Rate would be indicated.

Achieving a higher Information Tracking Rate, as defined here, may or may not improve **Mental Clock Rate**, and therefore *Strength*. I believe that it will, as you would gather by extension of the ideas on **Mental Clock Rate** in Part II.

Remember from the discussion of **Mental Clock Rate** in Part II on *Strength*, that doubling **Mental Clock Rate** is worth about 100 rating points in *Strength*, certainly a worthwhile goal.

B. The value of subliminal audiocassettes.

The issue is whether the playing of certain subliminal tapes can affect some characteristics of our chess playing. I think they can.

We’ve already touched on the possible use of subliminal tapes in Chapter 7. There, a list of a few of the companies making these audiocassettes was given. Should you be unfamiliar with subliminal tapes, they are simply audiocassettes in some format — music, or ocean waves, or something similar — with messages on them that cannot be consciously heard. These messages supposedly can be received by the subconscious, allowing them to be absorbed and used. The message is dubbed at a weaker level than the main sound track, at a weaker level than the waves, but above the audible threshold. The principle is that two sounds of different intensity, but each loud enough to be heard when played individually, will be received in the brain in such a way that

only the louder one will be heard consciously. Two examples of this are: not being able to hear road traffic while wearing a headset playing radio music or an audiocassette, and not being able to hear someone, even near you, speaking at a normal level at a rock concert.

The subliminal idea is that the brain receives the subliminal message and processes it. For some reason, it does not edit, or tune out, the message, as compared to the normal advice one hears, which is often blocked out due to some psychological hang-up.

Two specific examples come to mind. The company "Bright Images" has a tape called "Stopping Procrastination" (other subliminal tapes companies have similar tapes). Does listening to that tape reduce **Time Pressure**? I believe it can. Bright Images also has a tape called "The Idea Tape," which is supposed to unlock one's creative ability. Will playing this tape increase the frequency of clever moves, the frequency of brilliancies or good sacrifices? Again, I think so.

Without getting into too much detail about the scientific method of verifying a hypothesis, the method of testing this idea would have to be done carefully, but is straightforward. The company — say Bright Images — could make up tapes with the same music as the "Stopping Procrastination" tape, but without the subliminal messages. So the director of the experiment would have a number of tapes with, and a number of tapes without, the subliminal messages. He alone knows which is which. The tapes are given to a number of chessplayers who often get into **Time Pressure**, and whose recent history of **Time Pressure** — how often, how severe — is known to the experimenter. The players are also told about the purpose of the tapes. The players record their "listen-

ing times” of the tape, and also their subsequent games. The degree of reduction, if any, of **Time Pressure** among the players will be a reflection of the effectiveness of these tapes. The questions that will be answered are these: Does playing these tapes reduce **Time Pressure**? Is there a difference in the results among the group of players who played tapes with subliminal messages, the group who played tapes without subliminal messages but thought the messages were present, and the control group who didn’t play any tapes?

The testing of the hypothesis about “The Idea Tape” (or “Creative Thinking” by Potentials Unlimited, or similar tapes by other companies) is slightly more difficult, in that the results are harder to calibrate. Here, a group of masters could review the games of the participants (the masters wouldn’t know the participating players) before and after a period of listening to determine if there has been an increase in the innovativeness of the participants.

C. Time Pressure influence on chess *Strength*.

To determine the influence of something scientifically, the usual proviso is: “... provided nothing else changes.” Otherwise, two effects from two or more causes must be sorted out, often a very difficult task. So here, the question is: Does **Time Pressure** degrade results, providing nothing else changes? What does that mean? You might already be getting a headache trying to understand the question. Let’s try to break this down.

Imagine a player — who gets into **Time Pressure** in maybe a quarter of his games — playing a game, and not playing well. He’s having trouble finding moves, finding ideas, etc. He slows down to compensate. He’s taking longer than he normally would to

find reasonable moves. He gets into **Time Pressure**, and then loses.

If I looked at this situation in a shallow way, I would identify the **Time Pressure** as the culprit: **Time Pressure** degrades results. In fact, it was poor play that degraded the result. The **Time Pressure** was an effect, not a cause.

So what can we do? Suppose a selected group of players consent to play a number of games, some at 40/60 (40 moves in 60 minutes) and some at 40/90. Each player's games are recorded, as well as the time left at, say, 25 moves. Let's now work with just one subject, one player, to minimize confusion. Let's say he's rated 1700.

A master (or senior master), rated much higher than the players under study, without knowing the time control, and without knowing how long the subject player took to make these moves, now assesses the playing strength for the first 25 moves.

Now, the master has a good idea of the level of play of the average player rated 1500 in a 40/60 time control. He also has an estimate for players rated 1600, 1700, and so on. We'll call the "25-move *Strength*" the performance (during the first 25 moves) for any game expected of a player with that *Strength*, playing at a 40/60 time limit.

He scores every "set of moves" with a "25-move *Strength*."

Now, on average, the games played at the longer time limit will show up as higher levels of "25-move *Strength*." Remember that *Strength* means the strength expected at 40/60. So the player will have a higher level of play in his 40/90 games than those at 40/60.

We now have a reference and are ready to run the experiment.

A number of this player's games are monitored,

and for those games in which he ran into **Time Pressure** his “25-move *Strength*” is established. If this *Strength* was “okay,” in other words, if it was as good as expected for the “extra time,” then this game becomes part of the test data. We would tabulate his result for this game in the column under **Time Pressure**. The tabulation of games would show whether his performance in the column under **Time Pressure** is better, equal, or worse than those games where he did not get into **Time Pressure**.

D. Chess *Strength* vs. study time.

The testing to be done to establish this is straightforward cataloging.

APPENDIX II

COMPUTER-GENERATED MOVE-SEARCH ALGORITHM

If you were asked to generate a simple computer program to play chess, you would have to first put into program language, or put into code, the rules of chess: how the pieces move, legal moves with respect to chess, and so on. Let's say you've done that.

Now you have to provide the program with the means to make a move selection. The simplest idea that would probably come to mind would be to look at every possible board position for some number of ply (half-moves) into the future, and then count material — just figure out who's ahead in material — and make the move that puts you furthest ahead in material. Since we could surmise that for many move look-aheads there would be several moves that the program could select which would give the same material result — let's say even in material — you might want a tie-breaker.

For a tie-breaker, let's do this. Usually, more space for one's pieces is an advantage. A simple way — not foolproof, but good enough for our purposes — is to count the number of different moves available to you as a measure of the control of space. So it's really the difference between the number of moves you can make and the number of moves your opponent could make, if it were his move, that is to be used as a measure of control of space. If you happen to be in check, the number of moves available would be extremely curtailed; but we will not worry about that here. We'll accept this as a weak-

ness of the program. So the number of different moves you could make in the position minus the number of moves your opponent could make in this position, if it were his move, would be the tie-breaker. Our program would have two criteria for evaluation, namely, material and space.

Let's be more specific about the process of figuring out the move giving you the best material advantage. Let's do a "three-ply exhaustive minimax search" and count material (and space, if necessary).

Now what does that mean? Let's say you're White and about to make your 61st move from the position in Figure 63. You want to make the move that gives you the maximum advantage, after figuring out every Black response (Black's 61st) followed by any White response (White's 62nd).

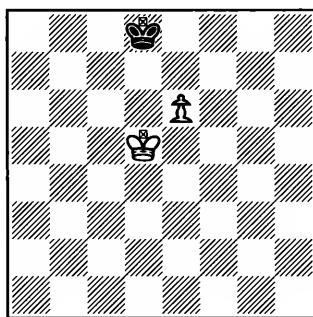


Figure 62—White to move

Visualize a blank notebook. All the possible move chains — meaning all possible combinations of White's 61st, Black's 61st, and White's 62nd — would be entered into this book. At the top of each page would be a candidate move — a choice for White's 61st.

Let's return now to the position of Figure 62. White has seven legal King moves available to him, plus the pawn advance, for a total of eight candidate

moves. For this position, then, there would be eight pages.

On any given page, we would enter on the left side, underlined and followed by a colon, a column corresponding to the different Black replies to the particular candidate move for that page. As an example: for the page for the candidate move Ke5, there are four possible Black replies. These four underlined moves would be ...Kc8, ...Kc7, ...Ke8, and ...Ke7. Next to each underlined entry, we would enter every possible White reply (White's 62nd move), just separating each of these moves with a comma.

The book, then, has every possible continuation of three half-moves.

We have just worked out, in principle, how we would generate an "exhaustive" three-ply lookahead. We'll describe the "minimax" analysis in general terms later; we'll start with a specific application of it here.

Let's look at any row on any page in the book. A specific row represents all White's legal answers (White's 62nd) to a particular Black response (Black's 61st move, written and underlined on the left side of the row) to the specific candidate move (one of White's options on his 61st) for that page. For the position looked at before, namely the candidate move 61. Ke5, and now choosing the Black reply 61... Kc7, White has seven possible continuations at his disposal, shown in the top line (next to

Ke5

61... Kc7: e7, Kd5, Kd4, Ke4, Kf4, Kf5, Kf6.

61... Kc8: e7, Kd6, Kd5, Kd4, Ke4, Kf4, Kf5, Kf6

61... Ke8: e7, Kd6, Kd5, Kd4, Ke4, Kf4, Kf5, Kf6

61... Ke7: Kd5, Kd4, Ke4, Kf4, Kf5

61... Kc7) of the table. The table also identifies the other three choices Black has for his 61st move, and each of White's possible responses.

Now on every row we can develop an evaluation for each of White's possible moves. The evaluation would be in two parts, and has two numbers — the first one being the material balance at the end of the sequence, and the second one being the difference between the number of legal moves available to White at the end of the sequence (even though White just made his 62nd move) minus the number of legal moves Black could make in response to White's particular 62nd. The first number, that is, material force, takes precedence, and the second is used only for tie-break purposes.

For the example above, all the move chains for 61. Ke5 Kc7, with any move to follow for White, leaves the material count at +1 (White is up a pawn) at the end of the sequence; so we need to work out the tie-break for each of White's seven legal continuations on his 62nd move.

e7: 8-6=2;
 Kd5: 6-5=1;
 Kd4: 9-7=2;
 Ke4: 9-7=2;
 Kf4: 9-7=2;
 Kf5: 8-7=1;
 Kf6: 8-7=1.

Here the numeral 8, listed after e7:, is the number of different moves White would have after 61. Ke5 Kc7 62. e7 if it were his move again, whereas the 6 that follows is the number of different moves that Black has after 61. Ke5 Kc7 62. e7.

The tie-break says that the best White continuation to 61. Ke5 Kc7 would result in +1, +2, meaning:

White up a pawn, and +2 in “space,” with four moves qualifying.

We’re ready now for a general definition of the *minimax* selection process.

We’re trying to determine which choice of White’s 61st move, or which candidate move, with best play for Black on his 61st, would yield a maximum evaluation (material plus the tie-break) for White after White’s best 62nd.

A couple of definitions are needed. We’ll call a “move sequence” any *particular string* of White’s 61st, Black’s 61st, and White’s 62nd move. Such a move sequence will have a notation such as M(3,2,5). Now the “M” merely stands for move sequence. The 3 means the “third legal move option” — we’ll explain that shortly — for White’s 61st move. Similarly, the 2 means the “second legal move option” for Black’s 61st (given the particular 61st move by White), and the 5 is the “fifth legal move option” for White’s 62nd, again given the particular White and Black 61st moves.

Now, what does “third legal move option” mean? In any chess position, we can order all the possible moves by one side in some clear, unambiguous way. We’ll give one such method now. We can start by numbering the squares “1 to 64” instead of “a1-h8.” Squares a1 to a8 would become squares 1 to 8, b1 to b8 would become squares 9 to 16, and so on. We could now number the legal move options this way: the legal move options of the King are categorized first, then the options for the Queen, then the options for *the Rook residing on the lowest-numbered square*, and so on. For any particular piece or pawn, the destination square of lowest number is the first move listed, and so on. The result is that the move sequence M(3,2,5) becomes a unique, universally agreed-upon sequence. You can verify for yourself

that $M(3,2,5)$ for Figure 62 becomes $61. Ke4 Ke7 62. Kf4$.

Next, consider the evaluation $H[M(5,1,x)]$. The inside parenthesis $M(5,1,x)$ means “any” move sequence, or any White continuation, for $M(5,1)$. Now $M(5,1)$ happens to be the sequence we looked at above, namely $61. Ke5 Kc7$. The “H” stands for the highest evaluation for White. So $H[M(5,1,x)]$ means the best final evaluation for White after White makes the best move after $61. Ke5 Kc7$. We’ve already worked that out above, with the result $+1, +2$, meaning: White up a pawn, and $+2$ in “space,” with four choices.

For Candidate Move 5, or $61. Ke5$, Black has four replies, each of which in turn can be responded to by White by various moves. Examine now the evaluation $L\{H[M(5,1,x)], H[M(5,2,x)], H[M(5,3,x)], H[M(5,4,x)]\}$. Now $H[M(5,1,x)]$ is the evaluation for the best continuation for White after $61. Ke5 Kc7$; $H[M(5,2,x)]$ is the evaluation for the best continuation for White after $61. Ke5 Ke7$; $H[M(5,3,x)]$ is the evaluation for the best continuation for White after $61. Ke5 Kc8$; and $H[M(5,4,x)]$ is the evaluation for the best continuation for White after $61. Ke5 Ke8$.

Now comes the “minimax” aspect of a chess-playing computer program. Black wants to choose the reply to $61. Ke5$ which is *least* favorable to White, or has the *lowest* evaluation for White. For consistency, “H” stands for the highest evaluation for White, or the best for White, while “L” stands for the lowest evaluation for White, or the worst for White. So, paradoxical as it may sound, the expression $L\{H[M(5,1,x)], H[M(5,2,x)], H[M(5,3,x)], H[M(5,4,x)]\}$ represents the *best that White can expect from $61. Ke5$, given best play by Black*.

The move selection — or candidate move — chosen by the program for White’s 61st would be the

move corresponding to the evaluation shown in the box below.

$H(L[H[M(1,1,x)], H[M(1,2,x)], H[M(1,3,x)], H[M(1,4,x)]],$
 $L\{H[M(2,1,x)], H[M(2,2,x)], H[M(2,3,x)], H[M(2,4,x)]\},$
 $L\{H[M(3,1,x)], H[M(3,2,x)], H[M(3,3,x)], H[M(3,4,x)]\},$
 $L\{H[M(4,1,x)], H[M(4,2,x)], H[M(4,3,x)], H[M(4,4,x)]\},$
 $L\{H[M(5,1,x)], H[M(5,2,x)], H[M(5,3,x)], H[M(5,4,x)]\},$
 $L\{H[M(6,1,x)], H[M(6,2,x)], H[M(6,3,x)]\},$
 $L\{H[M(7,1,x)], H[M(7,2,x)]\},$
 $L\{H[M(8,1,x)], H[M(8,2,x)], H[M(8,3,x)], H[M(8,4,x)], H[M(8,5,x)]\}) = ?$

This evaluation would determine the best of eight lines.

The first five candidate moves, $61. Kc4$, $61. Kd4$, $61. Ke4$, $61. Kc5$, and $61. Ke5$, each allow four legal responses by Black, while the sixth one, $61. Kc6$, allows only three Black responses, the seventh one, $61. Kd6$, allows two Black responses, and the eighth one, $61. e7$, allows five Black responses.

CHESS MASTER

... at any age

IMMORTALIZERS



Rolf Wetzell



APPENDIX III

SCENARIOS LEADING TO FLASH CARDS

In Chapter 4 we developed some Flash Cards. Additional ones are presented here, preparing you to start your own set.

A. Rote is NG.

Figure 63 is one of the test diagrams in Larry

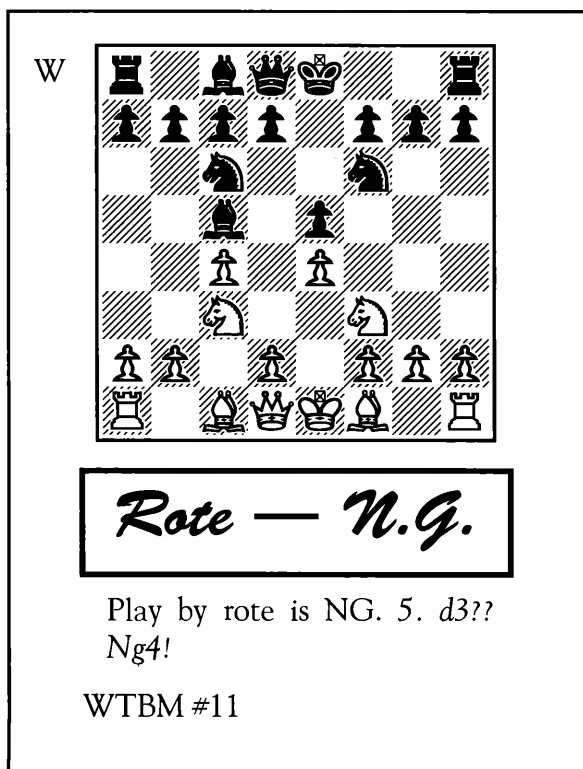


Figure 63

Evans's book *What's the Best Move?*. Here one of the choices was 5. d3, which I selected. I was looking at an eventual Bg5, and totally overlooked 5... Ng4 winning material for Black.

What happened? I played by rote, living in some sort of dream world of chess where I didn't expect the possibility of a "material winning move" as early as the fifth move.

So the grabber phrase is: Rote-NG, of course meaning: Rote — not good.

"WTBM #11" is my code for Question #11 from Larry Evans's book *What's the Best Move?*.

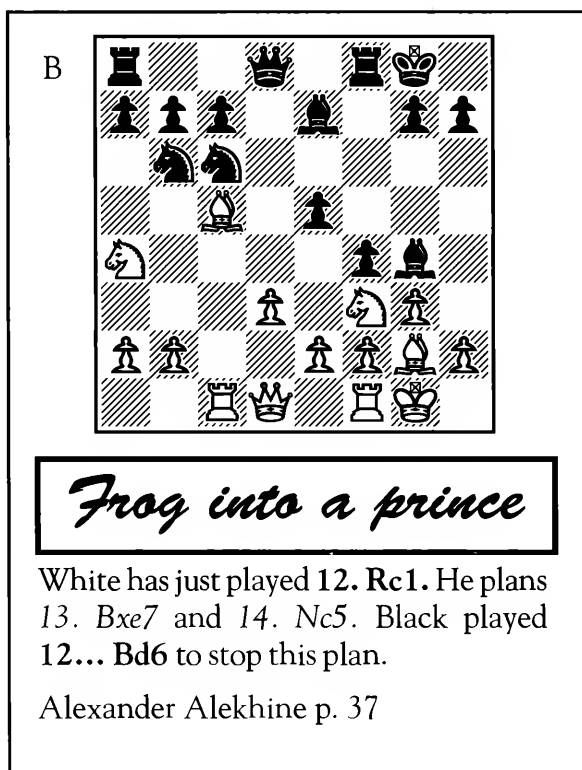


Figure 64

B. Frog into a prince.

In the game Czerniak–Alekhine, annotated in Alexander’s book *Alekhine’s Best Games of Chess 1938-1945*, White had just played 12. **Rac1** in Figure 64.

I didn’t understand the subtle purpose of this move, which was to follow up with 13. *Bxe7* and 14. *Nc5*. The Knight is much better placed uncontested (by a black minor piece) at c5 than the contested Bishop (Black neutralizes White’s Bishop at c5 with his own at e7), giving me the idea for the grabber phrase: *Frog into a prince*. Occasions will arise where a piece can be moved, or traded, with the idea of replacing it on that square with a “more suitable” piece, transforming a frog into a prince.

C. Central Knight — safe squares?

During the Comeau Memorial, Danvers MA, August 1985, I was on the move with the black pieces in Figure 65.

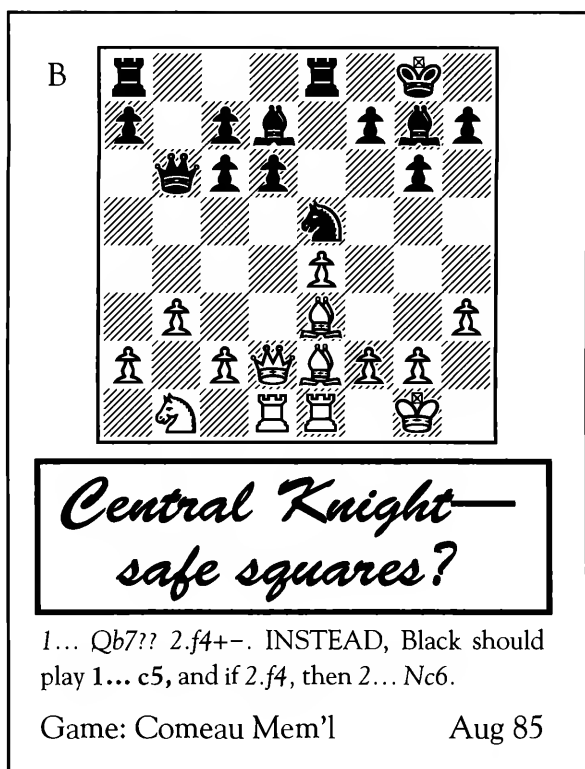


Figure 65

I moved my Queen, which was under attack, 1... Qb7. White went on to win my Knight with 2. f4!

What went wrong? It never dawned on me that a Knight could get trapped in the middle of the board.

So the grabber phrase: *Central Knight — safe squares?*

D. Redeploy!

I was playing Solitaire, emulating White in Figure 66 in Alekhine–Maroczy, New York, 1924, also annotated by Alekhine in his famous work *The Book of the New York International Chess Tournament 1924*, and chose 15. Qc5. Alekhine, however, chose

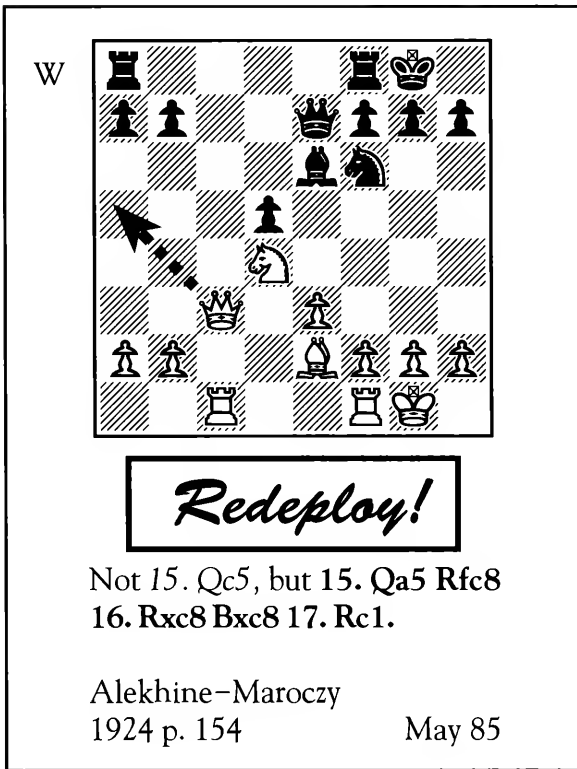


Figure 66

the more flexible 15. Qa5, when play continued 15... Rfc8 16. Rxc8 Bxc8 17. Rc1.

Typically, an attack conducted with Queen and Rook is best when one “leads with the Rook.” Here Alekhine cleverly moved the Queen to prepare 16. Rc7. For a grabber, I simply used: *Redeploy!* Again, I’ll always remember this idea when I see that Flash Card.

E. Predefend.

In the same game, while still playing Solitaire and trying to emulate Alekhine, it was White’s 22nd move in Figure 67.

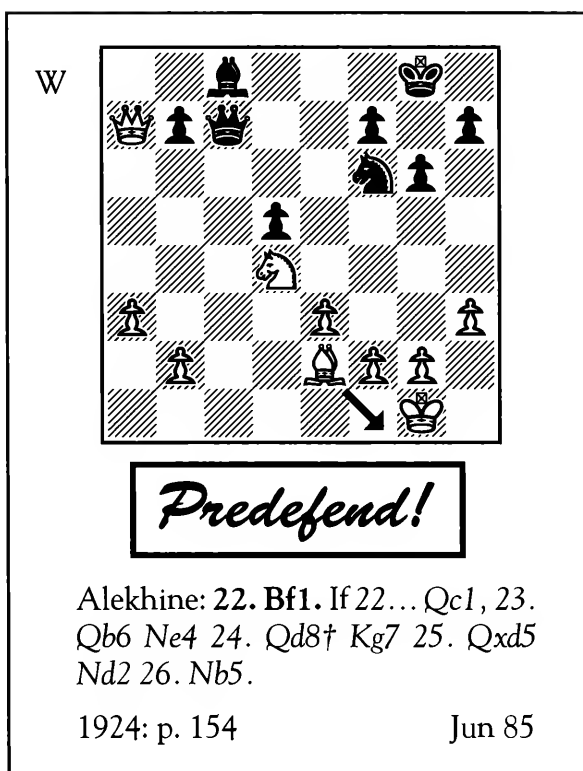


Figure 67

I chose 22. *b4*, with the idea that if 22... Qc1†, White does not lose material.

Alekhine, however, played 22. **Bf1**, *predefending* the check, so that if 22... Qc1, the squares b6, a5, and b8 free up for the white Queen, and play could continue 23. Qb6 Ne4 24. Qd8† Kg7 25. Qxd5 Nd2 26. Qb5, with decisive advantage (note by Alekhine in the same book).

The clever thing about 22. *Bf1*, or at least one of the clever things, is that White gets what amounts to a free move should Black pursue the idea of invading the eighth rank.

The grabber phrase: *Predefend!* The Flash Card has triggered this idea several times to my advantage

in my games, where I probably would not otherwise have thought of it.

F. There are other ideas besides recapturing.

In Larry Evans's book *What's the Best Move?*, one diagram in the section on the King's Gambit shows the position after 1. e4 e5 2. f4 Bc5. One of the options Larry gives the reader for study is 3. Bc4

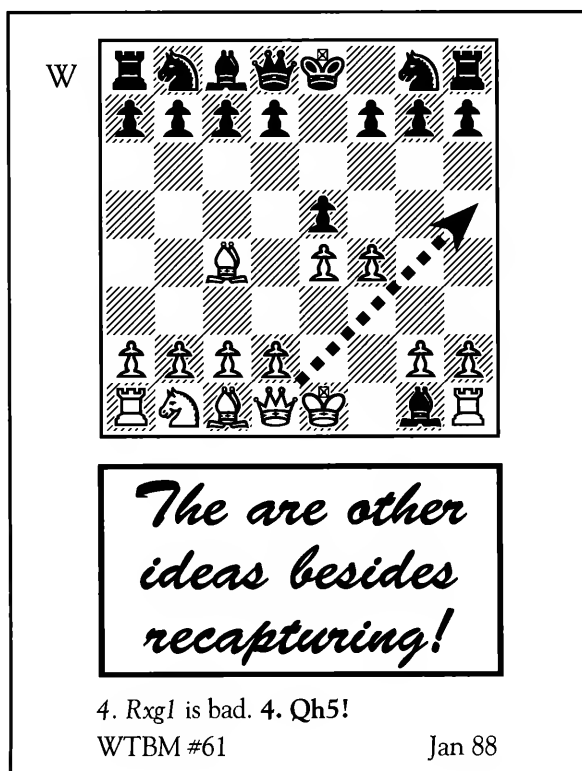


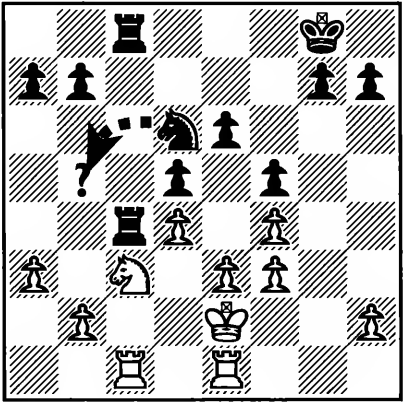
Figure 68

In studying this option, I was visualizing the position of Figure 68, assuming that Black might play 3... Bxf4. In mentally analyzing this position, I only looked at the continuation 4. Rxf1, when 4... Qh4† and 5... Qxh2 would follow (note by Evans).

I never looked at 4. Qh5, threatening mate, which of course stops Black from winning the Rook-pawn as in my mental analysis above. The whole sequence, according to Larry Evans, 3. Bc4 Bxg1 4. Qh5 Qe7 5. Rxc1 Nc6 with the idea 6... Nf6 is awkward for White. I believe the continuation 4. Rxc1 Qh4† and 5... Qxh2 is even less desirable for White.

For the record, Larry Evans gave three options for White's third move, namely fxe5, Nf3, and Bc4, with Nf3 as his recommended move in the position.

My concern was my incorrect evaluation of 3. Bc4, my conclusion that the move is worse than it really is. In contemplating my reasons for not seeing

B


*Don't prepare
useless sorties!*

31... Nb5—tricky! With what idea? Botvinnik: 31... b5—if 32. Kd3 b4 33. Na2 bxa3.

1/2 Century Game 54 Jan 86

Figure 69

4. *Qh5*, I concluded that I was obsessed with restoring the material balance after 3... *Bxg1* — after all, how can one seriously consider playing a piece down? This thought blinded me from even considering any other move.

So — the grabber phrase: *There are other ideas besides recapturing!*

G. Don't prepare useless sorties.

Here I was playing Solitaire, trying to determine Botvinnik's moves in Keres–Botvinnik, Chigorin Memorial Tournament, Moscow, 1947, annotated in Botvinnik's *Half a Century of Chess*, reaching the position of Figure 69 with Black to move.

Botvinnik played here 31... *b5*, so that if 32. *Kd3*, 32... *b4* 33. *Na2 bxa3*, which is very strong for Black.

I selected 31... *Nb5*, with the threat of 32... *Nxa3* winning a pawn (33. *bxa3 Rxc3*), but White easily defends against this transparent threat with 32. *Kd2* or 32. *Kd3*. So the grabber phrase: *Don't prepare useless sorties!*

H. The Block.

Here again, I was playing Solitaire, determining Botvinnik's moves in Rokhlin–Botvinnik, Leningrad Championship, 1926, also annotated in his book *Half a Century of Chess*, reaching the position of Figure 70 with Black to play his 41st move.

I selected 41... *Ba3*, moving the threatened Bishop out of harm's way. But Botvinnik chose 41... *Bd3*, safeguarding his threatened Bishop by blocking access to it. Furthermore, this move at the same time closes the d-file to White's Rook. Here, I hadn't even considered this move.

So, the grabber phrase: *"The Block."*

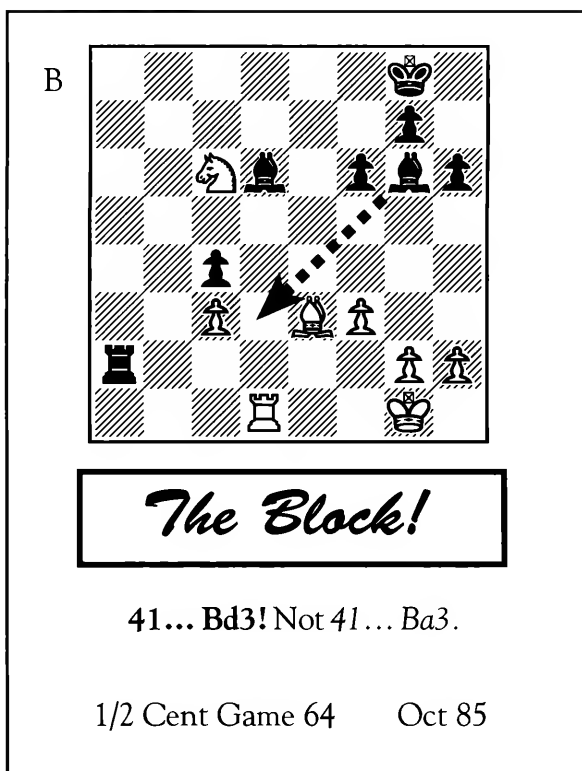


Figure 70

I. Permute!

I was studying the combination of Figure 71 from Reinfeld's *1001 Winning Chess Sacrifices and Combinations*, with White on the move. I selected 1. Rxh7†, figuring Black would continue 1... Kxh7 2. Nf6†, and that the double check wins easily after 2... Kh6 3. Qh7†. However, White really doesn't have a simple winning follow-up to 3... Kg5, even though Black's King is out in the open. Furthermore, I had overlooked 1... Kg8, when White doesn't have an immediate crushing continuation.

But what about an entirely different first move? How about 1. Nf6!! Black can avert mate at h7 by at

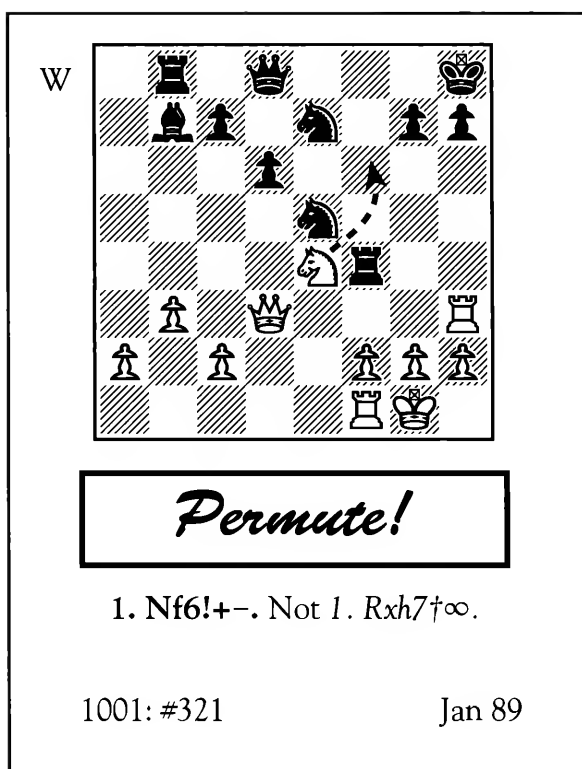


Figure 71

best one move with 1... Rh4.

What did I do wrong? The basic ingredients were there. I saw the mate at h7. What I didn't consider was that, with a simple alteration of the move order, White wins.

The grabber phrase: "Permute!"

J. The binary-results move.

In the game Rick Swift–Wetzell, Westford MA, February 1986, the position of Figure 72 was reached with Black to play.

I played 39... d3, figuring that the advance was risky but worth it, since after White would attack the

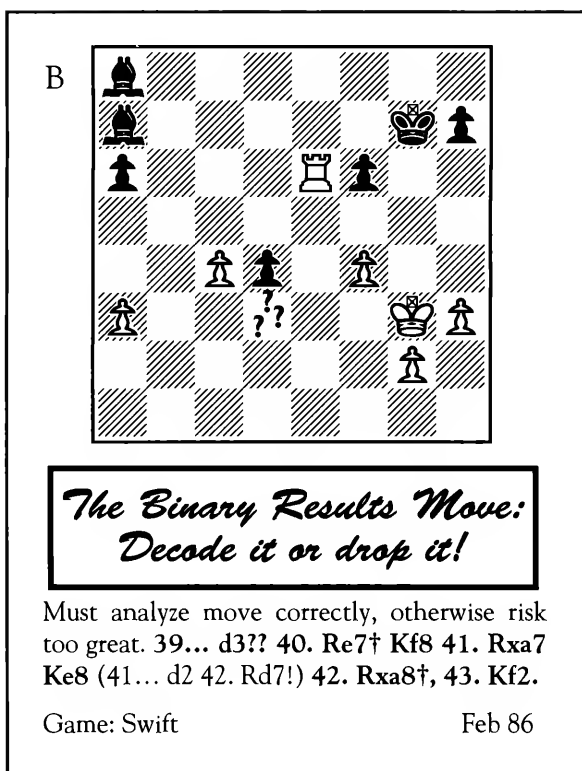


Figure 72

advanced pawn with his Rook with 40. Rd6, and Black played 40... Be4, White might be able to attack the Bishop with his King and Kingside pawns, but Black could probably keep up protection of the pawn.

I reasoned that certainly White didn't have time to win a Bishop with my pawn on the "sixth."

I overlooked that White could win outright with 40. Re7† Kf8 41. Rxa7 Ke8 (41...d2 42. Rd7 stopping the pawn) 42. Rxa8†, followed by 43. Kf2, stopping the pawn.

My opponent obliged by playing 40. Rd6, giving me a reprieve. I did not continue 40... Be4, as originally planned, because I finally saw the continuation

similar to the one given above (41. Rd7†, etc.). I played **40... Bc5** instead.

What did I do wrong on my 39th? To start with, my analysis was slovenly in making my 39th move. But more significantly, I made a move when I was aware that I may have reached a “game-deciding position” without evaluating it accurately. Strictly speaking, of course, any position may be considered a “game-deciding position,” but many moves have at stake “only” a positional advantage for the opponent if incorrectly evaluated, or possibly a pawn.

A certain percentage of moves selected at any “game-deciding position” will leave a win for the opponent. By doing a sloppy analysis, there is now a good chance that you’ll miss this. If your opponent now calculates it properly, he will have a won game. That puts you at an enormous disadvantage for pursuing this approach — not treating “game-deciding positions” with TLC — tender loving care.

The grabber: *The binary-results move* — *decode it or drop it!* Translated, it means this: a binary-results move is a move that could decide the outcome of the game, “binary” simply meaning two possible conditions. Decode it or drop it: figure it out properly, or don’t make that move.

You may have noticed that, in grandmaster games, a player having a significant advantage may make a series of temporizing moves near the time control, particularly if he doesn’t have much time, for the simple reason that he can’t do a “correct” analysis on a “game-deciding position” in the short time he has left. So he postpones making these “game-deciding moves,” such as starting a complicated pawn race, until he reaches the time control.

K. The attack beyond the galaxy!

In Figure 73, from *The Complete Book of Chess Stratagems*, by Reinfeld, I was trying to determine Black's answer to White's threat of winning the b-pawn.

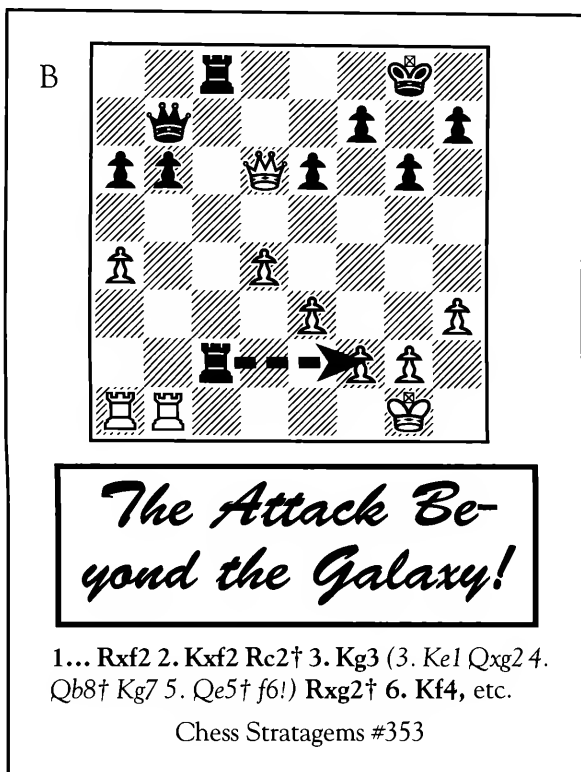


Figure 73

I did not even think of the Rook sacrifice 1... Rxf2 — now White cannot take the Rook, because if 2. Kxf2, 2... Rc2† 3. Kg3 (if 3. Ke1, then 3... Qxg2 is hopeless for White) Rxf2† 4. Kf4 (if 4. Kh4 it's mate after 4... Qe4† 5. Qf4 g5† 6. Kh5 Qg6) Rf2† 5. Kg4 Qe4† 6. Qf4 (any King move leads to mate in two) Rg2†, and after 7. Kh4 we again reach the position where Black mates as in the parenthesis after White's

fourth move.

So White must defend after 1... Rxf2 with 2. Qg3, leaving Black with the very enviable advantage of a pawn plus a Rook on the seventh rank.

What did I miss here? The g-pawn was in another galaxy — mentally inaccessible to me, shielded from Black's Queen and Rook by the f-pawn.

So the grabber phrase: *The attack beyond the galaxy!* We got to the next galaxy in two steps — 1... Rxf2 and (should White play Kxf2) 2... Rc2† leading to the capture at g2.

L. Home not always safe!

In the game Wetzell–Mishkin, Westford MA, April 1987, the position of Figure 74 was reached with White to play.

I played 10. 0-0-0, totally overlooking 10... Ng4 when the pawn at f2 cannot be defended.

What went wrong? I wasn't even thinking about f2 prior to castling. First of all, it was protected by the King; second, there wasn't an enemy piece near it. Third, one envisages an attack on f2 with the black Queen at h4 or f6, and a Bishop at c5. So, the trappings of "safety at home" were in the air. Playing 10. 0-0-0 allows 10... Ng4 with White having no way to protect the pawn at f2.

So my grabber phrase: *Home not always safe!*

M. Review relinquished protection!

In the same game, and the same move as directly above, another powerful theme is noticeable, namely that of "relinquished protection."

White's 10th move, castling long, relinquishes protection of f2. Whenever a move causes Relinquished Protection, a very rapid mental check just

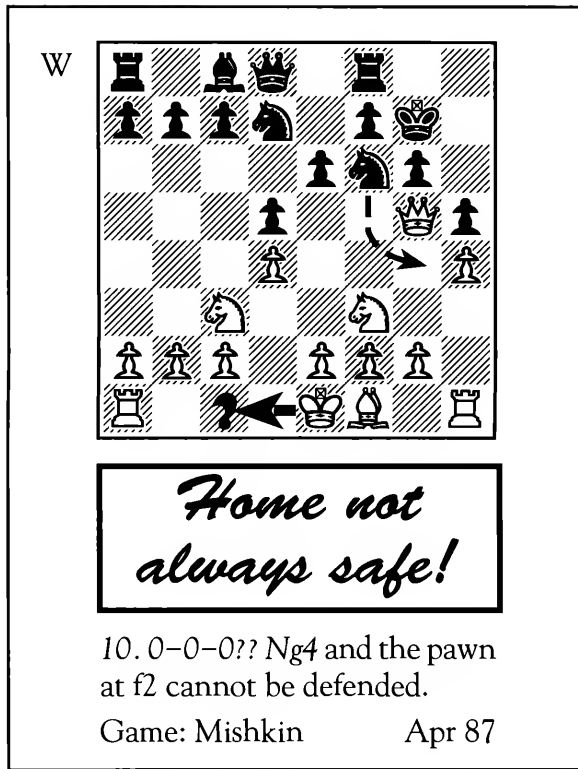


Figure 74

prior to moving should be made to confirm that no pawn, piece, or point is being left undefended, or “less defended,” by the move under consideration.

So we can create a diagram with the same position, Figure 75, with the grabber phrase: *Review relinquished protection!*

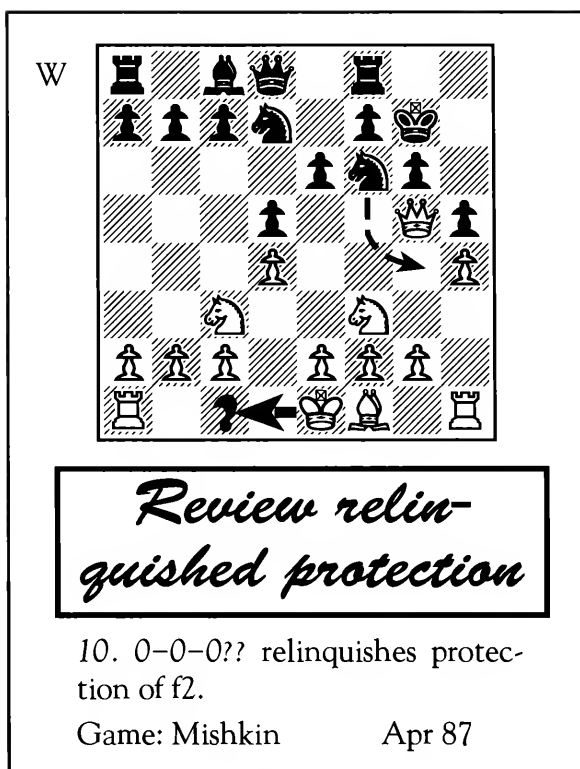


Figure 75

N. Transfer of forces.

Again playing Solitaire, trying to reconstruct Botvinnik's moves in Kotov–Botvinnik, 22nd USSR Championship, Moscow, 1955, the position of Figure 76 was reached with Black to play his 39th move.

I selected 39... Ra8, in order to recapture the pawn. Botvinnik selected the superior 39... Qe8, accomplishing the same objective while keeping control of the c-file.

What went wrong? I simply didn't think about transferring forces from wing to wing. The black Queen had been operating on the Kingside for so

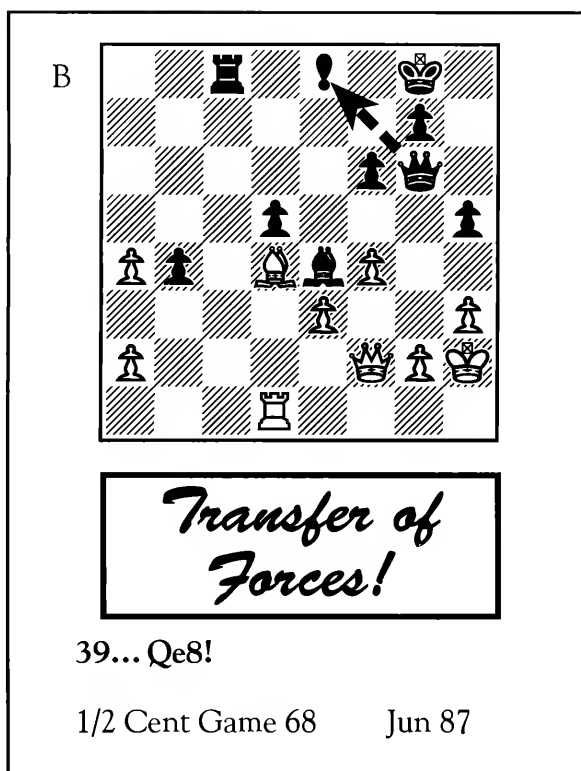


Figure 76

long that I must have believed it was her permanent theater of operations, doing a good job of keeping White's Queen away from Black's King. Botvinnik's choice for his 39th move recognized that it was unnecessary to keep the white Queen away from Black's King (where would she go — if 40. Qh4, then 40... Rc2, really putting White on the defensive), but these are secondary issues here. The important thing is that pieces can be transferred from wing to wing, with the Queen particularly agile.

Again, the important thing is that I did not have this motif as an operating *Image*.

So the grabber: *Transfer of forces!*

O. Why is pawn capture automatic?

In the game Roger Cappallo–Wetzell, Westford MA, October 1984, the position of Figure 77 was reached with Black to play.

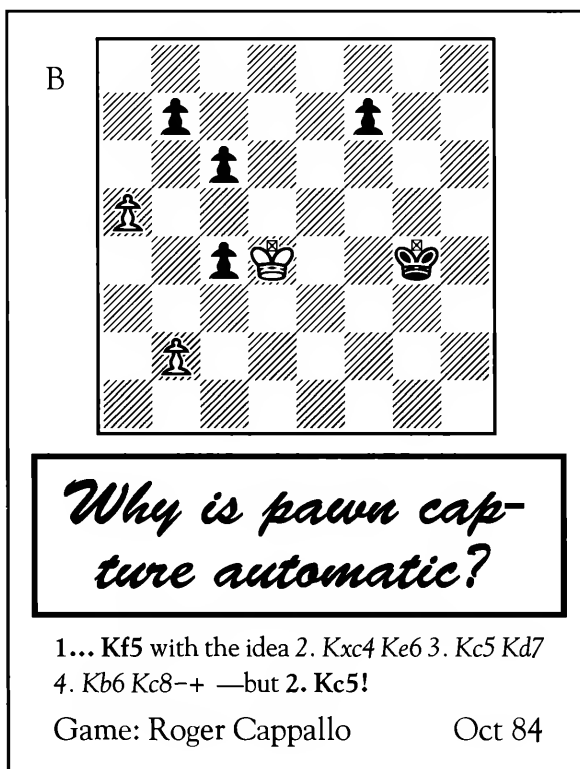


Figure 77

I calculated that if I started the pawn race with 1... f5, then White would play 2. Kxc4, followed by 3. Kc5, 4. Kb6, 5. Kxb7, and 6. a6, which I thought would be complicated, since I couldn't stop the a-pawn without giving up my Queen for it, with the outcome not clear-cut. I played 1... **Kf5**, figuring White would need four moves to capture my pawn at b7. I felt I could defend my pawn at b7, forcing White to go after my passed f-pawn, when I could in

turn go after the white Queenside pawns with my King, and win easily.

Let's dissect this thinking in steps. My first analysis was based on a certain move sequence, and an evaluation at the end. The move sequence I assumed, namely, 1... f5 2. Kxc4, etc., was wrong, since White would have played 2. Kc5, queening his a-pawn one move earlier than by my preconceived King journey including the pawn-capturing detour. The evaluation was also wrong because I concluded that the position after Black queened was unclear. Even if White had played 2. Kxc4, then 2... f4 3. Kc5 f3 4. Kb6 f2 5. Kxb7 f1=Q 6. a6 Qa1 7. a7 Qxb2†, after which Black simply gives up his Queen for the a-pawn and wins. However, the projection of the wrong first move by White is the major point.

What went wrong? Since usually the capture of an undefended pawn or piece, when such a move is available, is best, I was mesmerized by the pawn capture by White to the extent that I didn't look at any alternatives for my opponent on his first turn.

Actually, Black to play in Figure 77 is winning. 1... f5. If White enters the pawn race with 2. Kc5, he loses: 2... f4 3. Kb6 f3 4. Kxb7 f2 5. a6 f1=Q 6. a7 Qf7† 7. Kb6 (or 7. Ka6) Qf8 8. Kb7 Qg7† and now Black will capture the b-pawn, still give up his Queen for White's pawn, and win with his remaining pawns. Play might continue 9. Ka6 Qxb2 10. a8=Q Qa3† and 11... Qxa8. Or 9. Kb6 Qxb2† followed by 10... Qa3 and 11... Qxa8. If 9. Ka8 — hoping of course for 9... Qxb2 stalemate — Black simply temporizes with 9... Kf4, followed by 10... Qxb2†, 11... Qa3, and 12... Qxa8. If Black tries to stop the f-pawn from queening with 2. Ke3, play would continue 2... Kg3 3. Ke2 f4 4. Kf1 Kf3 and now White must give up his pawns or give way with his King with 5. Kg1 (or 5. Ke1 Kg2) Ke2 and the black pawn queens.

The grabber: *Why is pawn capture automatic?*

P. Look for the active defense!

Playing Solitaire, and trying to reconstruct Botvinnik's moves in Reshevsky–Botvinnik, Match USSR-USA, Moscow, 1946, the position of Figure 78 was reached with Black to play his 15th move.

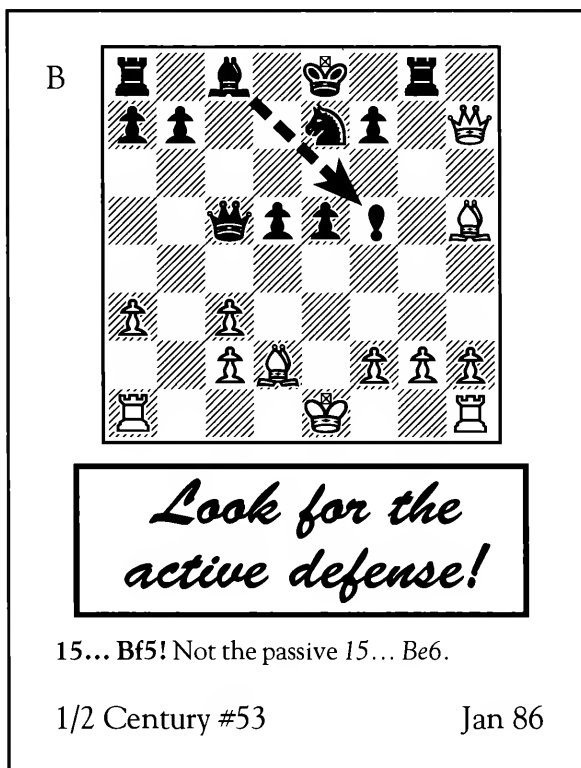


Figure 78

I saw that White was threatening 16. Qxf7†, and what chessplayer in his right mind ever allows the opponent to make a move like that when he can prevent it? I chose 15... Be6, defending f7 and developing the Bishop. But Botvinnik chose the much better 15... Bf5! In his notes he said that the move

undoubtedly surprised his opponent, and exchanged the f7-pawn for the g2-pawn, when White's extra pawn will be worth nothing, and his King has nowhere to go. The actual play continued **16. Bxf7† Kd7 17. Qh6 Rxc2**, etc.

What went wrong? I knew that 15... Be6 was not active, but first things first. I wouldn't think of allowing White to carry out the threat. I didn't even consider playing an active move which might allow him to carry out the threat.

So the grabber: *Look for the active defense!*

APPENDIX IV

BACKUP CALCULATIONS FOR THE MODEL

A. Evaporation rate of light and heavy liquid.

For the light liquid, assume that 8 percent of whatever amount of it exists at the moment evaporates in a week. That leaves 92 percent after one week. Now two months is somewhat shorter than nine weeks. If we multiply 0.92 by itself nine times ($0.92 \times 0.92 \times 0.92$, etc.), we'll get 47 percent, which is consistent with the concept of approximately half evaporating in two months.

For the heavy liquid, assume that 1/750th of it evaporates in a week. So the fraction left after a week, 749/750 of it, is 0.9987. This number, when multiplied by itself 522 times, which corresponds to the number of weeks in ten years, will leave 49.8 percent, or just about a half ($0.9987 \times 0.9987 \times 0.9987$, etc. = 49.8 percent), showing that the evaporation rate assumed is correct.

B. Calculation for liquid added weekly.

The typical 1600-rated player gets to add 2.75 units of liquid to his vase every week by the following rationale. The half-game is worth 0.5 games \times 1.5 hours/game \times 1 unit per hour, or 0.75 units. The half hour of actual study is worth 0.5 hours \times 2 units per hour, or 1 unit, and, likewise, the half hour "exposure to the world" is worth 1 unit, adding up to 2.75 units. It may help to think of the half hour allocation

for “exposure to the world” as similar to the \$200 one gets for rounding “GO” in Monopoly. One always gets this half hour, this unit of liquid, each week, in addition to any credit received for actual studying and playing.

A 1600-rated player will have 41 units of heavy liquid and 34 units of light liquid, for a total of 75 units of liquid in the vase for the situation where his rating is stable, adding 2.75 units of liquid every week. During the week, 8 percent of the light liquid, or roughly 2.7 units of this liquid, evaporates. Also, 1/750th of the heavy liquid, about 0.055 units, evaporates. This combined loss, or evaporation, of light and heavy liquid just balances the 2.75 units earned for the week, which, incidentally, is made up of 98 percent light liquid.

C. Rating track for a 1600 player who quits playing.

Let’s say a 1600 player stops playing, and stops studying. Eventually, after many years, he will stabilize at a rating strength in the vicinity of 1415, corresponding to 21 units of liquid, 6 of which will be light, and 15 will be heavy. The level of liquid in the vase, corresponding to his rating, will have stabilized, because he will lose 8 percent of the light liquid each week, corresponding to 0.49 units, and 1/750th part of the heavy (0.133 percent), corresponding to 0.02 units, totaling half a unit of liquid, just balancing the half unit he gets for the week for “exposure to the world.”

We could construct, from our model, a rating track, or rating chronology, of our player rated 1600, who suddenly stops playing and studying. He would start out with 75 units of liquid, 34 of the light and 41 of the heavy. Each week, for exposure to the world, he would add 0.49 units of light liquid and

0.01 units of heavy liquid. He would lose (forget), each week, 8 percent of his light liquid (of what he had at the beginning of the week) and 0.133 percent of the heavy liquid (again, of what was left at the beginning of the week). See Figure 79.

Various rating-related information for the 50 years following a player's departure from active play and study.

Time	Light Liquid	Heavy Liquid	Total Units	Strength
0 months	34.0	41.0	75.0	1600
1 month	25.6	40.9	66.5	1583
2 months	19.6	40.7	60.3	1568
4 months	12.5	40.4	52.9	1550
6 months	8.9	40.1	49.0	1539
1 year	6.0	39.3	45.3	1527
2 years	5.6	37.6	43.2	1520
4 years	5.6	34.6	40.2	1510
8 years	5.6	29.7	35.3	1491
16 years	5.6	23.2	28.8	1462
25 years	5.6	19.2	24.8	1440
50 years	5.6	15.3	20.9	1416

Figure 79

D. Rating calculations for increasing play.

Our 1600 player has decided to increase his playing to two different clubs, one game each other Tuesday evening (his original schedule of a game every other week) plus one game each week on Friday evening at a different club.

Adding an additional unit and a half (the "credit" for a typical game) of liquid each week, increasing the total input by 55 percent, from 2.75 to 4.25 units (1.5 games x 1.5 hours/game x 1 unit/hour, plus 0.5 hour of study x 2 units/hour plus 0.5 hours for expo-

sure to the world $\times 2$ units/hour), will make the level of the liquid rise above the reference level we have just been talking about.

As the level is increased, the total amount of liquid in the vase is increased, and the amount of liquid that evaporates each week is increased. This last point is true because, as the level of the liquid rises, the total surface area at the top exposing the liquid to evaporation increases, so that the rate of evaporation increases. The level — corresponding to the *Strength* this month — will keep rising until the increased evaporation just offsets the additional unit and a half added each week.

It works approximately this way. Doubling the weekly input to the vase will eventually increase *Strength* by 100 rating points. The model, the vase in Figure 20, is flanged in such a way that an increase in *Strength* of 100 points doubles the amount of liquid in the vase, and also that each 100 rating points increases the height of the liquid by the same amount. The doubling effect per 100 points compounds, so that to achieve a 300-point increase, the amount of the liquid increases by two times two times two, or a factor of eight. This is a geometric (or logarithmic) effect.

The player rated 1600, increasing his chess exposure from half a game a week to one and a half games a week, will raise his chess input 55 percent and obtain a 63-rating-point increase eventually.

APPENDIX V

ILLUSTRATIVE GAMES

The annotations to these games connect to ideas introduced earlier in this book. Typically, only two or three moves in each game relate directly to material presented earlier, hence the paucity of comments. Also, since the ideas presented in the book relate to methods of thinking, and also the breakdown of these, it would not be pertinent for me to comment on moves other people made, since I don't normally know how they arrived at their move selection.

This makes the annotations different from those in other chess books, where bad moves and good moves all draw comment. Here, a move without comment could have been excellent, mediocre, or terrible. It just turned out to not to have an association with anything in the book. The comments are mostly critiques of my moves, so all the games in this appendix are my games.

I prepared this appendix on the suggestion of Bob Long, the publisher of Thinkers' Press—I had not originally intended to include annotated games. Developing these annotations forced me to do, to a much greater degree than I would have, what I expounded so vehemently in the body of the book, namely to analyze my own games. During these analyses, I felt my *Strength* surging, to such an astonishing degree that I'm afraid to speculate on it for fear of being misleading. There's no question that I've been improving, during this short, but intense analysis period. I've been leaning into my games for about four hours each (typically one game a day for sixteen games), much faster than I alluded to in Chapter 4. It's too

early to tell the relationship between the study program and the improvement in *Strength*. As with all ideas, the rate of improvement per game studied, or per hour studied, will eventually decline, as explained in the body of the book.

I think it is useful to describe some features of the analysis, since it is providing such a powerful stimulus to my improvement in *Strength*. I have been conducting the analysis of these games alone, in a quiet environment, using a chessboard and moving pieces. I've had some good review comments by one master, but know that he had limited time. I couldn't just put together some careless analyses and expect others to catch all the mistakes. This has been a powerful incentive for me to do the analysis *right the first time*.

It is this accountability that may be the distinguishing feature making this type of analysis so valuable. I think that no chessplayer who analyzes and publishes something, would like his work branded as that of a lightweight, riddled with errors and false conclusions. I believe that GM Robert Byrne, who writes the excellent chess column for the *New York Times*, felt that the column was a real factor propelling him into the prestigious elite of the candidates for the World Championship in 1975. Undoubtedly this was because of the discipline in analysis required to put together a high quality column.

A couple of deep impressions came to light during these analyses. One is that, for the first time, I feel that I can come up with a *line*, which I never believed possible in the past; after all, I believed that was the province of the GM. The other is that I feel that I can accomplish much more (than I could prior to tackling the annotations for these games) on any move in over the board play. I feel I can analyze more quickly, and therefore more deeply in the same amount of time, so that I have an expanded Analysis Horizon.

As one goes through the games here, a clear impression

may be that I'm constantly admonishing myself for every little error, which might lead to a reverse Pygmalion effect. You might think that I'm going to go downhill in Strength and start to believe that I can't do anything right.

But it isn't so. It is the usual psychological guideline. **My admonition is:** *You made a bad move.* **Not:** *You're a bad player.* By way of example, Rigel Cappallo, 14 at the time we played the last game (game 16), has been playing, over the last couple dozen games, at a performance in the upper range of Master level. My annotations in that game include three important poor moves for me, but, overall, I must have played OK to draw. I take notice of that sort of thing and draw enthusiasm and confidence from it.

To summarize, I feel that playing significantly better after a very short (by chess standards, a couple of weeks is very short) period of relatively intense studying, is due to two key factors. The first is that my studying was affected by the continuous subconscious realization that I would be held accountable for the quality of my resulting analyses. The second is that I looked hard only for poor moves that I made, not good ones I made or poor ones my opponent made.

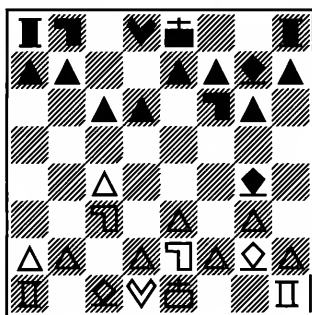
I hope these games will illuminate some of the ideas presented in the book.

Game 1

Wetzell—Barbara Peskin

October 1993

1. c4 Nf6 2. Nc3 g6 3. g3 c6 4. Bg2 Bg7 5. e3 d6 6. Nge2 Bg4



7. h3

7. h3? is a premature and unnecessary pawn move (White should simply have castled on this move), allowing 7... Bf5, threatening 8... Bd3, making White's development awkward. After 8. d3, Black could continue 8... Qc8, stopping White from castling King side. Here I was guilty of forgetting the lesson from an old Flash Card, Figure 30. *Dis-trust a pawn move; evaluate carefully its balance sheet!* Luckily my opponent played 8... Qd7, allowing me to get rid of Black's light squared Bishop after 9. Nd4, and castle King side after all. I decided not to convert this lesson into an additional Flash Card, as it was adequately covered by the existing Flash Card on Figure 30. What I will do is to take that Flash Card more seriously in the future.

7... Bf5 8. d3 Qd7 9. Nd4 Be6 10. Nxe6 fxe6 11. 0-0 0-0 12. d4 d5 13. Qe2 Ne8 14. Rb1 Na6 15. b4

Rc8 16. Bd2 e5 17. cxd5 exd4 18. dxc6 bxc6 19. exd4 Nac7 20. Qc4† Kh8 21. Be3 Nb5 22. Rbd1 Ned6 23. Qd3 Nxc3 24. Qxc3 Nb5 25. Qd3 Rfd8 26. d5 cxd5 27. Qxd5 Qe8 28. Qe6 Nd4 29. Qe4

29. Qe4? is a terrible move (29. Qa6 comes to mind, as well as 29. Rxd4 Rxd4 30. Bxd4 Bxd4 31. Rd1 Bg7), allowing a very simple combination leading to a Knight fork. Check, an in-between exchange move, and then Knight fork. Black's correct continuation was 29... Ne2† 30. Kh2 Rxd1 31. Rxd1 Nc3 winning the Exchange and likely the game. I tried to understand why I missed this combination, and believe now that I know the reason. I think we all know from childhood, or from our earliest games of chess, that it takes three moves for a Knight on d4 to capture a piece on e4, or on d1. So why did I miss this fork? I must have thought, subconsciously, that my Queen and Rook were safe, because it takes three moves for the Knight to reach either. What I never before thought of consciously was that a check, followed by a fork, allows the Knight to capture one of the two pieces, since neither can be moved in response to the check, and only one can be moved out of harm's way on White's second turn. I now constructed a new Flash Card, FC1, with the grabber phrase: *Beware of Knight C and F* (Check and Fork).

29... Ne2† 30. Kh2 Nc3 31. Rxd8 Qxd8 32. Qe6 Rb8 33. a3 Qc7 34. Bf4 Rb6 35. Qf7 Qd8 36. Bc7 Qf8 37. Qxf8 Bxf8 38. Bxb6 axb6

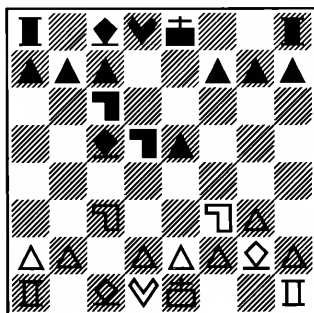
39. Re1 Nb5 40. a4 Nd4 41. a5 e6
42. a6 Nb5 43. Rxe6 and 1-0.

Game 2

Wetzell—Frank Deming

October 1993

1. c4 Nf6 2. Nc3 e5 3. Nf3
Nc6 4. g3 d5 5. cxd5 Nxd5 6. Bg2
Bc5



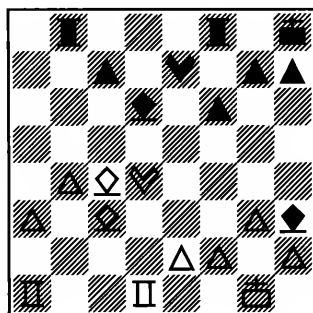
7. 0-0

7. 0-0? Missing a combination. I knew that Black must play carefully since White is threatening to win a pawn by Nxe5-Nxd5. I thought that 6... Bc5 was not a correct response, but I could find no way to take advantage. I analyzed over the board 7. Nxe5 Nxc3 8. Nxc6 Nxd1 (Allan Bennett suggested here for Black the much stronger 8... Bxf2† with the idea 9. Kf1 Qf6, while the Editor suggests the possibly stronger 9... Nxd1.) 9. Nxd8 Nxf2 and Black would be better.

I completely missed 7. Nxe5 Nxc3 8. Bxc6†, with a big advantage for White. So what was the problem? Normally I don't think of giving up the critical fianchettoed Bishop, defending the King, for a Knight. But there's another, more

important reason. In projecting the combination, the Bishop at g2 captures the Knight at c6, with two intervening pieces, two Knights, at f3 and d5. The combination was made possible through *discovered mobility*. For me, this grand theme of *discovered mobility* is having a more widespread application than I thought. Rather than make up another Flash Card, I will place a star near the diagram in all my Flash Cards with that theme, hoping that a Flash Card with a star will make a deeper impression than one without, when I'm reviewing it.

7... 0-0 8. a3 Be6 9. b4 Bd6 10. Bb2 Nxc3 11. Bxc3 a6 12. d4 Nxd4 13. Nxd4 exd4 14. Qxd4 f6 15. Bxb7 Bh3 16. Rfd1 Rb8 17. Bxa6 Qe7 18. Bc4† Kh8



19. Bd3

19. Bd3? This and my next move were totally reckless play. I was feeling high about my material advantage, which I will get back to momentarily, and embarked on some simpliminded tactics. Here White threatens to win immediately with 20. Qh4, when Black must give up the light squared

Bishop to avoid mate. When Black parried with 19... f5, I started to feel uneasy about the safety of my Lady, and thought to carry the fight to my opponent with 20. e4, creating a safe square at e3 for my Queen.

So, what's so bad? Among my existing Flash Cards, I have one with the mantra: *When ±, don't muddy the water!* The advice is: "When ahead in material, or when enjoying a permanent positional advantage, don't start double edged play with chances for both sides." On considering my 19th and 20th moves, I knew that ...c5 and ...f5-f4 were in the air, with the potential of an open, or semi-open f-file for Black. Even though I had *raking* Bishops trained at the black King, the position was much too complicated for me to see far enough to judge the outcome of any King side attack. It was absolutely crazy for me to play this way. On my 19th move, I could have simply played 19. e3 with the idea 20. Bf1, when White has consolidated and can start thinking about exploiting his winning two pawn advantage. Even after 19. Bd3 f5, 20. e3 would have held down the fort. Black would run into granite (P/e3, P/g3) if he tried ...f4 (20... f4 21. exf4 Bxf4 22. Qe4 forces the exchange of Queens) and White's Queen was safe, or if 20... c5 21. bxc5 Bxc5 22. Qe5 Qb7 23. Bf1 when White retains a winning advantage. Admittedly, Black's chances are much better after 19. Bd3 than 19. e3, but the point here is that I had two oppor-

tunities to consolidate, and instead engaged in a game of "Chicken."

I deserved to get into serious trouble over my reckless 19th and 20th moves. Black's 19th through 23rd moves in the actual game continuation were good, and started to make White feel the heat. Instead of 24... Qg5, Black could have played 24... fxf3 25. fxf3 Bc7 with the idea of 26. bxc5 Qxc5 winning at least the Exchange, or 26. Qf2 Bb6 with excellent winning chances in an over the board, relatively short time limit. All these games were controlled at 40 moves in an hour.

Here then, the *don't muddy the water* Flash Card is nearing Grand Theme Status, so we'll draw a star on that one too, instead of generating another Flash Card.

19... f5 20. e4 c5 21. Qe3 Bg4 22. Rf1 f4 23. Qd2 Bf3 24. Rfe1 Qg5

Black was starting to knock me around the block over my reckless 19th and 20th moves, until his 24th move. Instead of his 24... Qg5, he could have played 24... fxf3 25. fxf3 Bc7 with the idea of 26. bxc5 Qxc5† winning at least the Exchange, or 26. Qf2 Bb6 with excellent winning chances in an over the board, relatively short time limit game. All these games were controlled at 40 moves in an hour.

25. e5 Qh5 26. exd6 Qh3 27. Bf1
and 1-0.

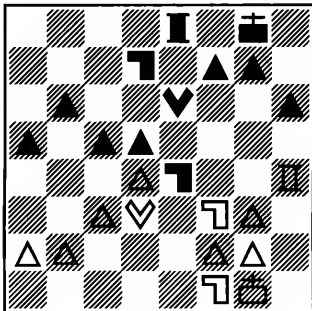
Game 3

John Loyte—Wetzell
September 1993

1. e4 e6 2. d4 d5 3. exd5 exd5
4. Nf3 Bd6 5. c3 Nf6 6. Bd3 0-0
7. Bg5 h6 8. Bh4 Re8† 9. Kf1 b6
10. Nbd2 a5 11. Qb3 Nbd7 12.
Bg3 Bxg3

12... Bxg3? allows White to open the h-file for his Rook by playing 13. hxg3, thereby getting compensation for his uncastled position. I was aware of this during the game, but didn't want to allow 13. Bxd6, creating two Black isolated pawns. I didn't think I had any decent squares for my Knight at d7, completely overlooking ...Nf8, where I might have continued with ...Ne6 and ...Nf4. Now, 12... Nf8 may not be that good, since White has 13. Ne5-Bb5. The important thing is that I didn't consider the move. I had previously constructed a Flash Card with the theme *Retreat to attack*, but must not have thought of this as an attacking situation. So a new Flash Card with the mantra: *Retreat is OK! FC2.*

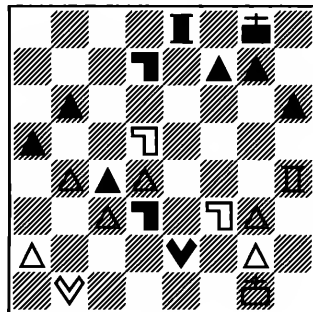
13. hxg3 Ba6 14. Bxa6 Rxa6 15. Qb5 Ra8 16. Rh4 Re6 17. Qd3 Qe7 18. Re1 Re8 19. Rxe6 Qxe6 20. Kg1 Ne4 21. Nf1 c5



22. Ne3

22. Ne3? allows Black to take advantage of his "discovered mobility." As you recall, this was a grand theme I hit upon after a number of Flash Cards over an extended period. Here the Knight at e4 screens the major pieces on the e-file. If Black tries to take advantage of this theme immediately with 22... Nxc3, White could continue by capturing on c5 and then on d5. Black needs to deflect White's Queen in order to be able to exploit the discovered mobility. 22... c4 23. Qc2 (23. Qe2 allows Black to win a pawn with 23... Nxc3) Nxf2. Here Black stays a pawn ahead, with a better position to boot with 24... Qxe3 should White capture the Knight at f2. In the game, White continued with 24. Nxd5, regaining his pawn but allowing Black to obtain control of White's second rank, a big advantage. Black's simple combination is an exploitation of discovered mobility.

22... c4 23. Qc2 Nxf2 24. Nxd5 Qe2 25. Qb1 Nd3 26. b4



26... axb4

26... axb4? allows White to complicate the game. I have a Flash

Card, which I alluded to in the previous game, which I review religiously, as I do all my Flash Cards, with the theme *When ±, don't muddy the water!* I should have simply continued the attack with 26... Qf2† and 27... Re2, winning; for example 27. Kh1 Re2 28. Rh2 (28. Qg1 Qxg3 with the two threats ...Nf2† and ...Re1) Rc2 with the threat ...Rc1†; or 27. Kh2 Re2 28. Qg1 Qxf3. We already have a star on that Flash Card, elevating it to Super Flash Card status.

27. Nxb4 Qe3† 28. Kh2 Nf6 29. d5 g5

29... g5? Once again missing the discovered attack (the White Rook's control of the fourth rank was screened by his d-pawn) by the move 29. d5. Also, the possible 30. Rxc4 was an *attack on a rank*, a theme I miss more often than I should, and, furthermore, the mantra for an existing Flash Card. The move 29... g5 was a Should-A-Been, since I missed both of the above themes, but would have been OK. Play might have continued 30. Rxc4 Nf2 31. Nc2 Qe2 32. Rd4 N6g4† 33. Kg1 Ne4 and White must lose more material to avoid mate by ...Qf2 and ...Nxg3. Instead of 29... g5?, Black could have played 29... Nf2 with a similar continuation as the note directly above, 30. Nc2 Qe2 31. Ncd4 N6g4† 32. Kg1 Qe3 with the same mate threat as above.

30. Nc2 Qf2 31. Rxh6 Ng4† 32. Kh3 Nxh6 33. Ncd4 g4† 34. Kh2 gxf3 35. Nxf3 Re2 36. Nh4 Nf5 and White overstepped the time limit.

Game 4

Wetzell—Rigel Cappallo

September 1993

1. c4 g6 2. Nc3 Bg7 3. g3 c5 4. Bg2 Nc6 5. Nf3 e6 6. 0-0 Nge7 7. e3 0-0 8. d4 cxd4 9. exd4 d5 10. cxd5 Nxd5 11. Nxd5 Qxd5 12. Ne5 Qb5 13. Nxc6 bxc6 14. Qc2 Ba6 15. Rd1 Rac8 16. Rb1

16. Rb1? I did not carefully evaluate Black's response. I didn't really consider an invasion of my second rank—that would be unheard of—just barely into the middle game, and, after all, there wasn't even an open file yet! Black's ...Qe2, followed by less than sterling play on my part, did much to undo my game. I thought about my sixteenth move, and concluded that I was unaware of the danger of an invasion of my second rank, primarily because it was still early in the game. A Flash Card is in order, with the theme: *Normandy invasion possible?* The invasion at Normandy during World War II was a surprise to the Germans, so the message is to search for the way my opponent might surprise me, particularly with an invasion of my back rank, or second rank. FC3. Rigel pointed out the simple 16. Be3 after the game, when 16... Qe2 could be answered with 17. Rd2.

Important, but less so than missing 16... Qe2, is my continuation, allowing Black to gain space and keep me off balance with ...f5, ...e5, and ...f4. Better than my 17. Be4 would have been 17. Qxe2, followed by Rd2. Black would not

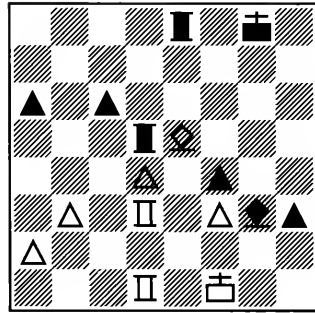
have been able to make those pawn moves with gain in tempo. But evaluating my 17th move insufficiently far into the future is an **APROP** issue. Black's 22... f4, really the first clear sign of a problem, is eleven ply, eleven half moves, beyond the move I was considering. I am currently reassessing my **APROP**. My gut reaction is that, at this time, my *Analysis Horizon* is not eleven ply deep, so that a move eleven ply "away" can legitimately surprise me.

16... Qe2 17. Be4 f5 18. Bd3 Bxd3 19. Qxd3 Qxd3 20. Rxd3 Rcd8 21. Be3 e5 22. R1d1 f4 23. gxf4 exf4 24. Bc1 Rd5 25. b3 g5 26. Ba3 Re8 27. Bc5 a6 28. Kf1 g4 29. f3 h5 30. Kf2

30. Kf2? Black is continually improving his position and will sooner or later penetrate somewhere. I should have tried 30. Re1, challenging Black's control of the e-file. After 30... Rxe1 31. Kxe1 g3 (31... gxf3 32. Kf2 or even 32. Rxf3, when White can recover his pawn should Black elect to take the d-pawn) 32. Kf1 and White may be better off than in the text. 32... h4 33. Kg2 and if 33... Rh5 with the idea ...h3-g2, then 34. Kh3.

Not considering 30. Re1 is disturbing, hence a new Flash Card with the theme *When inferior, look for exchanges and counterplay!* FC4.

30... Bf6 31. Bb6 Bh4† 32. Kf1 g3 33. hxxg3 Bxxg3 34. Bc7 h4 35. Be5 h3



36. Ke2 c5 37. Kf1 h2 38. Kg2 cxd4 39. Bxd4 Re2† 40. Kh1 Rxa2 41. R3d2 Rxd2 42. Rxd2 Rd8 43. Kg2 Kf7 44. Kh1 Re8 45. Rd1 Re2 46. Bc5 Kg6 47. b4 Kh5 48. Bb6 Kh4 49. Bc5 Kh3 50. Bd6 Rf2 0-1

Game 5

Allan Bennett—Wetzell

October 1993

1. e4 e6 2. d4 d5 3. e5 c5 4. Nf3 cxd4

4... cxd4? Here I violated one of my own principles and an admonition of an existing Flash Card, whose mantra was: *Why a wrong sixth move in the opening* (implying that I shouldn't be playing if I don't have a familiarity with the openings I choose through at least eight moves)? White's more frequently played fourth move is the quiet c3, maintaining both center pawns. I've studied the lines arising from that move, but not from 4. Nf3, and so was playing from general principles here. With correct play, Black has an easier game against 4. Nf3 than 4. c3 but not if he's unfamiliar with the themes and must play by his wits. A better plan

for Black, taking into account the lack of knowledge with this specific continuation, was to play the *forgive and forget variation*, namely 4... Nc6, expecting White to play 5. c3 transposing to familiar lines, and then, after the game, study the lines arising from 4. Nf3 cxd4 in order to avoid surprises in the future.

4. Nf3 cxd4 5. Bd3 Nc6 6. 0-0 g6? It turns out that this move is not in keeping with the position, and, if it's any consolation, I became aware of that within the next few moves in the game. So a Flash Card with the mantra: *Know eight moves!* advising, of course, to know at least eight moves of any opening you may encounter. **FC5.** I will make it a point to be prepared to that extent for all the lines I play for our club championship next month. After all, there aren't that many trees or variations to learn, if one only has to be familiar with the first eight moves of each. To give some credence to this statement, let's agree there aren't that many lines for the first five moves, remembering always that only the opponent's choices of moves create different variations. At any point in an opening when it is our move, we choose the move that suits us best, not two or three. We must, of course, take into account all reasonable moves for our opponent at moves six, seven and eight, but this should leave a manageable total number of variations (two to three hundred). If this number of lines seems staggeringly high to you, take only those

where a different move is introduced through the seventh move (instead of through the eighth move). This cuts down the number of variations drastically, which I'm sure you can master.

5. Bd3 Nc6 6. 0-0 g6 7. a3 Qc7 8. Re1 Bg7 9. Bf4 Nge7 10. Nbd2 0-0 11. Bg3 Nf5

11... Nf5? is a serious mistake, allowing White to damage Black's pawn structure, and easily recapture his d-pawn. I was already unhappy with my position, and anxious about what I thought were powerful White Bishops, expecting an attack imminently. Black should simply play 11... Bd7, when White still has the not so simple task of recapturing the pawn on d4. For example, 12. Nb3 Qb6, and should White withdraw his light squared Bishop along the f1-a6 diagonal in order to attack d4 for the third time, Black then has ...Nf5 and ...Nxd3. A Flash Card is called for. The mantra: *How bad can it be—view from opponent's perspective.* **FC6.**

12. Bxf5 gxf5 13. Nb3 Bd7 14. Nbx4 Nxd4 15. Nxd4 Rac8

15... Rac8? Playing without a plan. I was already not playing and thinking actively, disappointed in having allowed myself to get into a messy position on my sixth move 6... g6. After the game, and looking at this position with Black to play his 15th move, I saw very quickly that White has several related, simple winning plans. For example, Bf4-Qh5-Re3-Rh3-Qxh7; or Bf4-Qf3-Qg3-Bh6 threatening mate; or Bf4-Qf3-Qg3-Bg5-Bf6 threatening

mate; or Qh5-Nf3-Ng5 threatening mate. It seems imperative that Black must prepare ...f6-fxe5. Even if White plays f4 and maintains a pawn on e5, Black can connect his pieces on the second rank (without a pawn at f7), and possibly get some play on the g1-a7 diagonal. So Black should instead play ...Rae8-Qc8-f6-fxe5.

So the bottom line is that I didn't have a *real* plan, and worse, I didn't look for a real plan. I now seriously think I should have told myself that I have to find a real plan, even if that plan is wrong, instead of pushing wood. A Flash Card is called for. The mantra: *Find a real plan!* FC7.

16. c3 Qb6 17. Qd2 Kh8 18. Rac1 Qd8 19. Qf4 Rg8 20. Bh4 Qc7 21. Bg5 Rgf8

21... Rgf8? Missing my last chance to salvage the game. 21... Bxe5! 22. Qxe5† Qxe5 23. Rxe5 Rxc5 and White would have to struggle to draw. Let's examine why I missed this simple combination. For one thing, it fell in with my *Discovered Mobility* grand theme covered in an earlier chapter, so that under normal circumstances, I should have seen it. However, as I played 20... Qc7, I realized that ...f6 was a powerful threat, since White's Queen is loose should he capture with his pawn at f6. But 21. Bg5 parries the threat (21... f6 22. exf6 Qxf4 23. fxg7† winning). So there was an inertia in my thinking, an obsession with getting in ...f6. To prepare, I had in mind 21... Rgf8

and ...Qb6.

A Flash Card is called for, with the mantra: *Jettison obsessions; jettison inertia!* In other words, don't get hung up on one idea, such as thinking that defending is the only thing left in life, or the idea of getting in ...f6, to the exclusion of being able to see other opportunities. FC8.

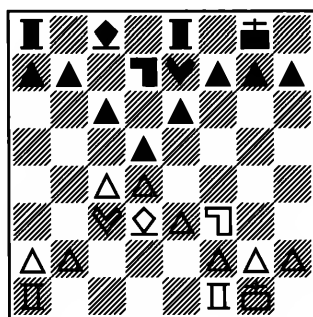
22. Qh4 Kg8 23. Re3 1-0.

Game 6

Wetzell—Allan Bennett

August 1993

1. c4 e6 2. Nc3 d5 3. d4 Nf6 4. Bg5 Be7 5. Nf3 Ne4 6. Bxe7 Qxe7 7. Qc2 c6 8. e3 Nd7 9. Bd3 Nxc3 10. Qxc3 0-0 11. 0-0 Re8



12. Rac1

12. Rac1? is a mindless move. I should have played 12. cxd5, when Black would answer 12... exd5 (12... cxd5 would allow White to penetrate on the c-file, and furthermore, would saddle Black with an isolated d pawn should he break with ...e5), when White can continue with the minority attack: b4-a4-b5-bxc6. The text move allows

Black to break with ...e5 and immediately equalize. The lesson to take from these observations is to not play perfunctory moves, but to look hard for a plan. We can dust off FC7 with its mantra: *Find a real plan!*

12... e5 13. dxe5 Nxe5 14. Nxe5 Qxe5 15. cxd5 Qxd5 16. Rfd1 Qg5 17. Bc4

17. Bc4? Pushing wood!—I just thought it would be nice to allow the Rook to control the d-file, and maybe at the same time attack f7. I didn't look at the logical demands of the position, part of which are to consider Black's tasks. Since Black needs to develop his Bishop, 17. Qb4 would restrain Black's development by attacking b7. Also, in the event of 17... Bh3, 18. Bf1 would be a better defense than a pawn move. The Queen move is more flexible and allows White to maneuver on the ranks, where Rc5 comes to mind. Another plan might be to play Re1-Rc2-f3-Rf2 followed by the advance of the e and f pawns. These comments on moves 12 and 17 warrant another Flash Card. The mantra: *Analyze the demands of the position!* FC9. Now you'd think by now, after all these years, and many games, I'd be aware of that fairly obvious challenge, but apparently I'm not. Now I may be too harsh in my self-evaluation here, since these games annotated in this section were played at a 40 in an hour time control, and, admittedly, I've spent more than a few minutes coming up with these plans after the game. Nonetheless, I certainly could im-

prove considerably on the shallowness of the plans underlying my actual moves, without getting into Time Pressure.

Now that I think of it, my friend Mike Hart, a master and my chess mentor in the 1980s, helped me during the 1988 U. S. Open by talking with one of my opponents, also a master, after I lost the game. He told Mike that he felt I was away from the board too much, and generally didn't seem to work hard enough. At the time, I thanked Mike for his sleuthing, and tried to take it to heart, but it now appears that I didn't, since I'm making so many shallow moves. I believe I've discovered a grand theme, namely, that I underutilize my analytic ability, that I am capable of deeper, higher quality plans than the ones I've generated over the board. So, another Flash Card—FC10, with the mantra: *Think hard at the board; no shallow moves!*

17... Bh3 18. g3

18. g3? I'm going to give that move a question mark, not necessarily because it's a bad move, but because I considered 18. Bf1 only fleetingly. How could I move the Bishop again so soon, since I just posted it aggressively at c4? Besides, it would be an admission that I didn't consider Black's last move. I'd be hanging out my lack of foresight for all to see. I didn't think this consciously, but subconsciously, this undercurrent of thinking must have influenced me to pass over 18. Bf1 in a very short time,

surely in less than ten seconds.

A Flash Card is in order. The mantra: *Swallow your pride; consider moving the same piece twice.* FC11.

18... Rad8 19. Qb3 Qh5 20. Rxd8

20. Rxd8? I was planning Qxb7, but playing it immediately would lose to 20... Rxd1†. So, I thought, I simply need to exchange a pair of Rooks to break up the combination. After Black recaptured with 20... Rxd8, I realized that 21. Qxb7 Rd1† 22. Bf1 h6, and although it was White's move, it looked like there were too many strong continuations for Black. And so I refrained from 21. Qxb7. Allan told me after the game that he had an immediate win (after 21. Qxb7) with 21... Qd1† 22. Bf1 Qxc1. So there were two things wrong. I missed the Queen sac; without the Queen sac (let's assume neither player saw the possibility 21... Qd1†) I saw ghosts, when, in fact, I could have played 21. Qxb7 (...Rd1† 22. Bf1 h6 23. Rxd1 Qxd1 24. Qa6).

Two Flash Cards are in order. One with the mantra: *Material isn't everything; the Queen can be sacked!*, and the other with the mantra: *Don't get run out of town; analyze to a concrete position.* FC12 and FC13.

20... Rxd8 21. Qc2 Qf3 22. Bf1 Bxf1 23. Rxf1 g5 24. Re1 b6 25. e4 c5 26. Qe2 Qxe2 27. Rxe2 g4 28. Kg2 Rd3 29. h3 h5 30. hxg4 hxg4 31. Rc2 Kg7 32. Kf1 Kf6 33. Ke2

Rd7 34. f3 gxf3† 35. Kxf3 Rd3† 36. Kf4 Rd1 37. Rf2 Ke6 38. Ke3 Rg1 39. Kf3 Re1 40. Rd2 Rc1 41. Ke3 Rc4 42. Rf2 a5 43. Rh2 b5 44. Kd3 a4 45. Rh6† f6 46. g4 a3 47. b3 Rd4† 48. Ke3 b4 49. Rh5 Kd6 50. Rh6

50. Rh6? Overlooking that 50. Rf5 wins a pawn, when White might have some winning chances. So how did I overlook such a simple move? I had been working so hard to obtain a draw, that mentally I was predisposed to the idea that *the best I could do is draw*. But that, of course, is incorrect—players make mistakes that turn the game around. A Flash Card, with the mantra: *Re-assess the win/draw objective every move!* FC14.

½-½

Game 7

Brad Ryan—Wetzell

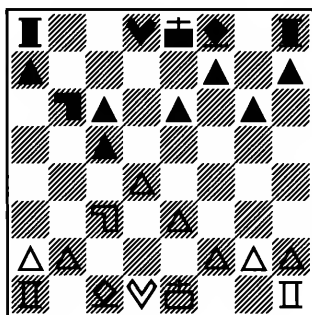
August 1993

1. c4 Nf6 2. Nc3 d5 3. cxd5 Nxd5 4. Nf3 c5 5. d4 Nc6 6. e3 g6

6... g6? Here I missed giving White an isolated pawn. 6... cxd4 7. exd4 (7. Nxd5 Qxd5 8. Nxd4 Nxd4 9. Qxd4 Qxd4) and White has an isolani, with Black having a comfortable game; or 7. Nxd4 Nxc3, when White gets an isolated c-pawn. Now 6... cxd4 is not necessarily such a great move, since White's dark squared Bishop is freed after 7. exd4, but my point is that I never explored this variation. I mechanically played ...g6, steering into a sort of Gruenfeld defense. The lesson? FC5, recently developed, had the mantra: *Know the first*

eight moves! Not quite so tersely, it advises me to learn, and know, the first eight moves of any opening I might encounter! Also, a Flash Card in existence before this book has the mantra: *You may think in the opening!* I'll pay more heed to these two Flash Cards and will consider that my correction, my remedial plan.

7. Bc4 Nb6 8. Bb5 e6 9. Ne5 Bd7
10. Nxc6 Bxc6 11. Bxc6 bxc6



12. 0-0

The result of my poor opening play. White could have played 12. dxc5, leaving me with an isolated c-pawn and a nice target for attack.

12... cxd4 13. exd4 Bg7 14. Ne2 0-0 15. Rb1 Qd5 16. b3 Rfd8 17. Be3 Qa5 18. Qc2 Nd5 19. a4 Rac8 20. Qc5 Qxc5 21. dxc5 Nxe3 22. fxe3 Rd2 23. Rfe1 Rcd8 24. Ng3 f5 25. b4 a6 26. Nf1 R2d3 27. b5 axb5 28. axb5 cxb5 29. Rxb5 Rc3 30. Rb6 Kf7 31. c6 Be5

31... Be5? Wrong plan! I reasoned that I may as well start by fixing White's c-pawn, then attack it. But the problem is that this tempo allows White to win the h-pawn as in the game. After 32.

Rb7†, if 32... Kg8, I was afraid of Ra1-Ra7, when White has doubled on the seventh. As it turns out, this is not as ominous for Black as *Wild Pigs* usually are, because of White's poor King position.

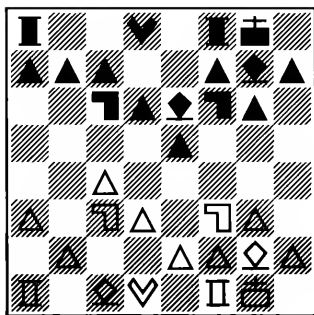
So what is the problem? I should have simply attacked White's c-pawn again with 31... Rc8, when 32. Rb7† Kf6 just wins the pawn (33. Rd1 R8xc6 34. Rdd7 Bh6 and Black stays a pawn ahead). So a Flash Card, with the mantra: *Rule no. 1: Pile up on the target.* FC15.

32. Rb7† Kf6 33. Rxx7 Rxc6 34. Rb7 Rc2 35. Rb3 Ra8 36. Rd3 Raa2 37. g3 g5 38. Rb3 Bc7 39. Rb5 f4 40. gxf4 gxf4 41. exf4 Bxf4 42. Kh1 e5 43. Rb7 Kg5 44. Rb3 Kh4 45. Rb4 Kg5 46. Rb3 Rf2 47. Rb4 Kf5 48. Rb3 Bxh2 49. Nxx2 Rxx2† 50. Kg1 Rhg2† 51. Kh1 e4 52. R3e3 Rg4 53. Rh3 R2g2 54. Rf1† Ke5 55. Re1 R2g3 56. Rxx3 Rxx3 57. Kh2 Rg6 58. Rg1 Rxx1 59. Kxx1 Kd4 60. Kf2 Kd3 0-1.

Game 8

Wetzell—Larry Charpentier
July 1993

1. c4 Nf6 2. Nc3 Nc6 3. g3 e5
4. Nf3 d6 5. Bg2 g6 6. 0-0 Bg7 7.
a3 0-0 8. d3 Be6



9. b4

9. b4? allows 9... e4 10. Ne1 exd3 11. exd3 Ne4 12. Bxe4 Bxc3 and Black is slightly better. This little combination is not the end of the world for White, so it's really a Should-a-been. In examining my ninth move, I missed the *Discovered mobility* grand theme again. We'll not generate any more Flash Cards, but I'll pay better attention to the Flash Cards with that theme.

9... a6 10. Rb1 h6 11. a4 Qd7 12. b5 axb5 13. axb5 Ne7 14. Re1 c5 15. Be3

15. Be3? Perfunctory development. The dark squared Bishop hasn't moved yet, so why not do that? I now can think of at least two reasons. Firstly, the Bishop move should fit into some plan (which it did not), and secondly, why would I move my Bishop to a square, only to move it again along the same diagonal when my opponent makes a pretty transparent, easy to find response? Let's examine the second reason first. Looking at my 16th move 16. Bd2, it's obvious that I hadn't considered Black's Knight move 15... Nf5. But it would seem

logical to examine all *reasonable* responses by one's opponent. A fairly recent book titled *Thinking Strategically* by Avinash Dixit, expounding the competitive edge not in chess but in other endeavors, has as its title to the second chapter: *Anticipating your rival's response*. In that chapter, one of the sections is titled: *The first rule of strategy*. Finally, in that section, we have **Rule 1: Look ahead and reason back**. So we'll use the title of the section and Rule 1 as the mantra for our next Flash Card. FC16.

What about the issue that 15. Be3 did not fit into any plan? I have started playing the English Opening only recently, after having played openings with the *control the center with pawns* strategy all my life. As a result, my positional understanding of the ideas of the English is just beginning. After the game, it took me quite a while to come up with any plan at all. Again, my point here is that it's always nice to have a *correct plan*, but it's more important to have *some plan*. A plan might have been Qb3-e3-d4-dxe5, or if Black exchanges twice on d4, he is saddled with the isolani. The lesson here is already covered in FC7: *Find a real plan*. That Flash Card appears to be headed toward grand theme status.

15... Nf5 16. Bd2 Ra7 17. e3 Nh7 18. Qc2 g5 19. Bc1 Ne7 20. Bb2 Bh3 21. Bh1 Rc8 22. Na4 Qd8 23. Rbd1 Nf8 24. Qb3 R8a8 25. Nc3 Nd7 26. d4 Nf5 27. dxe5 Nxe5 28. Nxe5 Bxe5 29. Ne4 Qe7 30. Rd5 f6

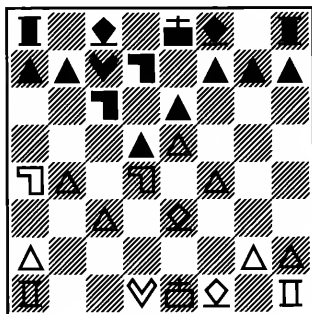
31. R1d1 Rd8 32. Bxe5 fxe5 33. Nxc5 R8a8 34. Ne4 Ra3 35. Qb1 Qc7 36. Nxd6 Ne7 37. R5d3 Qa5 38. Nxb7 Qc7 39. Rxa3 Rxa3 40. c5 Bf5 41. Qb4 and White won in a few more moves.

Game 9

Frank Deming—Wetzell

July 1993

1. e4 e6 2. d4 d5 3. Nc3 Nf6 4. e5 Nfd7 5. f4 c5 6. Nf3 Nc6 7. Be3 Qb6 8. Na4 Qa5† 9. c3 cxd4 10. b4 Qc7 11. Nxd4



11... a6

11... a6? A fairly simple move to find is 11... Nxd4, just from general principles. Black is cramped, White's N/d4 is better than Black's N/c6, and what's more, after 11... Nxd4 12. Bxd4 (if 12. Qxd4 Be7, ...0-0, ...f6, ... fxe5 destroys White's center), the B/d4 is hemmed in and nowhere the dynamic piece that the N/d4 would have been.

So why didn't I see this? After thinking about it for a while (all these observations under discussion were made well after each game was over), I realized that I'm prepro-

grammed not to exchange pieces in the center in the opening, since usually that strengthens the opponent's position. But, of course, there are exceptions. A Flash Card, FC17, is in order. The mantra: *Consider piece exchanges in the opening.* Implied is: always consider piece exchanges in the opening. We'll leave the *always* off in order not to clutter up the Flash Card, and keep the mantra simple. Most people don't have this programmed aversion to exchanges in the opening—it's probably more a personal issue with me.

12. Be2 b5 13. Nb2 Be7 14. 0-0 0-0 15. a4 Nxd4 16. Bxd4 Rb8 17. Qd2 f6 18. axb5 fxe5 19. fxe5 axb5 20. Rxf8† Nxf8 21. Nd3 Bd7 22. Nf4 Be8 23. Ra6 Qc8 24. Qa2 Bxb4 25. Nxd5 exd5

25... exd5? Carelessly played, giving up the Bishop pair to White, as well as ceding White the more dangerous passed pawn (I believe White's e-pawn would become more dangerous than Black's d-pawn). I know I didn't think about this move very long, yet wound up giving a permanent advantage to my opponent. 25... Bc5! 26. Nb4 (if 26. Ne3 b4 27. Qa5 Bxd4) Bxd4† 27. cxd4 Qc1† 28. Bf1 Qe3† 29. Qf2 Qxf2 and Black is much better than in the game.

My conclusion is that I was just careless. I didn't stop at a quiet position and assess whose game is superior. A Flash Card is called for. The mantra: *No carelessness—assess the final quiet position.* FC18.

26. cxb4 Qc1† 27. Bf1 Bf7 28. Ra7 Qf4 29. Qa1 Ne6 30. Ra8 Rf8 31. Rxf8† Kxf8 32. Bf2 d4 33. Bxb5 Qxe5 34. Qa8† Ke7 35. Qb7† Qc7

35... Qc7? loses to a Bishop combination, as played by my opponent, where 35... Kf6 keeps Black in the game. Yes, I feel I should have been able to see this coming, but was there anything special about this position, contributing to my not seeing it? After thinking about it, I conclude that there is. All of us have been exposed to the fearsome power of two raking Bishops. Perhaps an unstated corollary is implied, that *cross-raking* Bishops—as in 36. Bh4† as my opponent played—are not so dangerous. But they are more dangerous than one expects, as I rapidly learned. Two Flash Cards are in order. FC19 has the mantra: *Beware the cross-raking Bishops!* The mantra for FC20 is: *Consider two candidates!* Here, considering at least two is implied.

36. Bh4† g5 37. Bxg5† Kf8 38. Bh6† Ke7 39. Qe4 Bg6 40. Bg5† Kf7 41. Be8† Kxe8 42. Qxe6† Kf8 43. Bh6† 1-0.

Game 10

Wetzell—Roger Cappallo

July 1993

1. c4 Nf6 2. Nc3 g6 3. g3 Bg7 4. Bg2 0-0 5. Nf3 d6 6. 0-0 e5 7. d4 Nc6 8. d5 Ne7 9. e4 Bg4 10. h3

I played 10. h3? semiautomatically. It was the simplistic way of putting the question to the Bishop. Particularly, with Black's g-pawn advanced, Black can't play 10...

Bh5. If, instead of the pawn move, White continues his development with Qc2-Be3, Black cannot go willy nilly into the simple break ...f5, for example: 10. Qc2 Nd7 11. Ne1 and 11... f5? would be answered by f3-h3-g4, when Black must lose material. Furthermore, 10. h3 weakens the King position, which I was aware of.

So what was the problem? As I explained above, I played 10. h3 too automatically. A Flash Card is in order, with the mantra: *Putting the question is a weakening pawn move—evaluate carefully!* Here putting the question means, of course, putting the question to the Bishop. FC21.

10... Bxf3 11. Bxf3

11. Bxf3? I played this move knowing I would move the Bishop again, almost certainly back to g2, in response to the eventual standard break ...f5. Mike Hart pointed out to me—why not 13. Qxf3, when I would get a free developing move for the Queen (in lieu of the Bishop retreat)? So, instead of 11. Bxf3 and 12. Bg2, we'd have 11. Qxf3 and 12. Qd3. A good point. The mantra for a new Flash Card, FC22, is: *Look at both recaptures!* Usually, a piece captured must be immediately recaptured. So, particularly because the response is so limited, one should look at both pieces, or all three, if three pieces can recapture.

11... Nd7 12. Bg2 f5 13. f4

13. f4? Another preprogrammed pawn move. I remember in Reuben Fine's *Ideas behind the Chess Open-*

ings, that f4 is the correct response to ...f5 in the King's Indian Defense. However, having played h3, my pawn structure on the King side is too loose. The resulting pawn exchanges in the center favor Black markedly, with his excellent minor piece position. I should have played more cautiously here, developing slowly on the Queen side with Rb1-b4-Na4-c5, or even 13. f3. If Black advances ...f4, then g4 and f3.

So what's the remedial action? I already have a Flash Card, developed earlier, Figure 30, with the mantra: *Distrust a pawn move, examine carefully its balance sheet.* We'll put a star on it for extra emphasis. Here again, with my preponderance for weakening pawn moves, this motif is getting close to becoming a grand theme.

13... exf4 14. Bxf4 Nc5 15. exf5

15. exf5? Running scared, making yet another *unforced pawn move*. I like that description, one that's unique and easy to grasp, undoubtedly entering my mind from *unforced errors* in tennis. I was afraid of ...Bxc3, taking away a defender of the P/e4, as well as damaging my pawn structure further. So I played 15. exf5, aware of the resulting splendid position of my opponent's minor pieces. If I had thought a little further, I should have seen that 15. Qc2 is OK, when Black can't capture the e-pawn with 15... Bxc3 16. Qxc3 fxe4? because 17. Bh6 is strong for White.

So, a new Flash Card is in order,

FC23, with the mantra: *Be wary of unforced pawn moves.* Now I realize that most pawn moves are unforced—1. e4, 1. d4 and 1. c4 immediately come to mind, but I will not misinterpret this Flash Card to block those kinds of moves.

Considering the lessons from this game, unforced pawn moves, or, more accurately stated, making undesirable unforced pawn moves looks like it just achieved grand theme status.

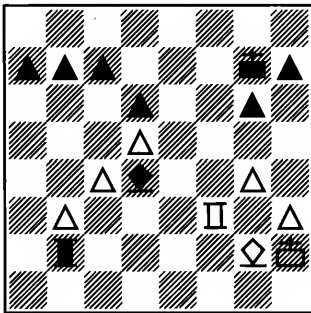
15... Nxf5 16. Qd2 Qf6 17. Kh2 Qd4 18. Qxd4 Bxd4 19. Ne4 Ne3 20. Bxe3 Bxe3 21. Nxc5 Bxc5 22. Rae1 Rxf1 23. Bxf1

23. Bxf1?? allows Black to penetrate the seventh rank, as well as win at least one pawn, without having to allow White a *useful* invasion of the seventh. Black simply plays 23... Rf8, when White can't stop ...Rf2. White can't move his Rook from the first rank, since that would leave the Bishop loose, so after 24. Bg2, Black invades with 24... Rf2. White's 25. Re7 would be useless, since Black just defends with 25... Bb6 followed by mopping up White's Queenside pawns.

What was I thinking about? After 22... Rxf1, I reasoned that I needed my Rook on the e-file for a quick invasion of the seventh rank. So, 23. Bxf1. I never considered what Black would do after my recapture. You'd think that after all the games of chess I've played, I'd remember that we take turns in this game. In the note to the 15th move

of Game 8, we developed FC16, about looking ahead and reasoning back. Let's generate another Flash Card with the mantra: *Strategy rule 1: Look ahead and reason back.* This example is more stark than the one from Game 8. So we'll develop this one, **FC24**, and discard the previous one, FC16—we won't put it into the stack to be repeatedly reviewed. But, since this is a repeat, a budding grand theme, we'll put a star on this Flash Card.

23... Rf8 24. Bg2 Rf2 25. b3 Rxa2 26. Rf1 Kg7 27. g4 Rb2 28. Rf3 Bd4



29. h4

29. h4? Another bad move leading to the loss of a second pawn. 29... Bf2 forces 30. h5 (30. Kh3 Bxh4!), when all of Black's pawns become weak. In considering my 29th move, Black's response and the forced advance of the h-pawn are not beyond my ability to foresee. So what happened? I was playing by general principles, concerned, and probably rightly so, that my King was hemmed in, with threats like ...Rb1-Be5† in the air, when I'd have to lose the Exchange. But I

should have projected some moves ahead, to see if Black can really carry out this threat in the absence of my 29. h4. It turns out that Black cannot easily capitalize on White's cramped King, for example, 29. Rd3 Be5† 30. Kg1 Rb1† 31. Kf2. Black can of course advance his King and possibly choke off White's King's access to safe squares, and make progress that way, but at least Black would still have to demonstrate some chess ability to bring home the point, instead of being handed the point by White's gift of another pawn.

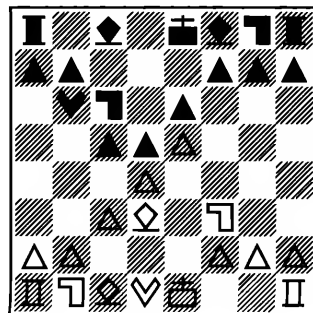
A Flash Card, FC25, is called for, with the mantra: *Don't be intimidated into a pawn move!*

29... Bf2 30. h5 gxh5 31. gxh5 Kh6 32. Rh3 Kg5 33. Be4 h6 34. Bg6 Be3† 35. Kh1 Rxb3 and Black won shortly thereafter.

Game 11

George Mirijanian—Wetzell
June 1993

1. e4 e6 2. d4 d5 3. e5 c5 4. c3 Nc6 5. Nf3 Qb6 6. Bd3



6... Bd7

6... Bd7? Allowing White to play 7. dxc5 followed, after 0-0, by b4, gaining space. Since I was playing by general principles here, not seeing that the position reached after 9. b4 favors White considerably is understandable. The problem is, however, that many players, even well below the master level, know the refutation to many poor moves in the opening. This gives those players a huge edge when playing a person of similar ability who is playing by general principles. I therefore think it's necessary to know at least playable lines in the opening, for any opening that one might encounter, for a certain number of moves—and for some of the sharp lines, even more. Now the number of moves one needs to know to *get out of the opening alive and reasonably well* depends on various factors, and particularly, rating *Strength*. I believe that at the Expert level, one should know all lines that one may encounter through eight moves anyway, and considerably more in the sharper lines, such as the Marshall attack against the Ruy (1. e4 e5 2. Nf3 Nc6 3. Bb5 a6 4. Ba4 Nf6 5. 0-0 Be7 6. Re1 b5 7. Bb3 0-0 8. c3 d5 9. exd5 Nxd5 10. Nxe5 Nxe5 11. Rxe5 c6), assuming, of course, that one is playing the Ruy with White.

In this game I played a wrong sixth move! It's time to dust off FC5, with the mantra: *Know at least eight moves of any opening you may encounter!* Let's put a star on that Flash Card, to remind me, when reviewing it, that it has become a

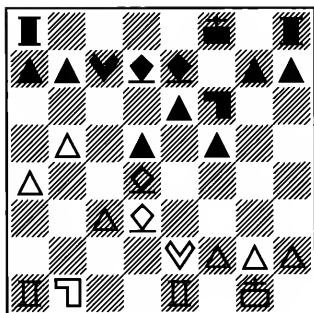
super Flash Card, because the theme has been come up more than once.

Since part of the Flash Card master plan is to review the entire stack at least once every two months, we can make a mental note to be on the lookout for this particular one, so that, as we encounter it in review, we can take a minute to put a star on it.

7. dxc5 Bxc5 8. 0-0 f6 9. b4 Be7 10. Be3 Qc7 11. b5 Nxe5 12. Nxe5 Qxe5 13. Re1 Qc7 14. Qh5† Kf8 15. a4 f5

15... f5. A seriously weakening pawn move, creating potential weak squares in Black's camp. I felt that ...f5-Nf6 was a good tempo gaining sequence attacking the white Queen, but the long range, positionally debilitating feature of this pawn move far outweighed the short term gain. But my real problem was a certain impatience. Again, slightly longer over the board thinking should have revealed that I could play ...Bd6-Ne7, and slowly think about ...e5, which, when finally implemented, would result in a very strong position for Black. In short, I was in a rush. A Flash Card is in order, with the mantra: *With extra material, consolidate patiently!* FC26.

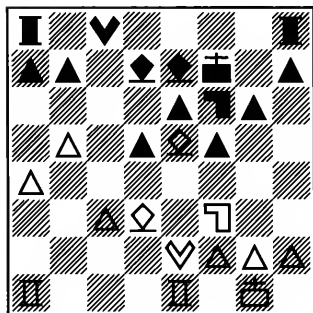
16. Bd4 Nf6 17. Qe2



17... g6

17... g6? Another weakening pawn move intending to parry the threat 18. Bxf5. However, 17... Bd6 was probably better, or 17... Qd6, or even 17... Re8 (White can't play 18. Bxa7 because of ...b6). White cannot easily get to Black's King (after 17... Bd6) with Bxf6-Qh5 etc, because Black has moves such as ...Be8 and ...Qg7. Here, the move ...g6 may not be that much weaker technically than the alternates mentioned, but my feeling is that I went to the pawn move, which I knew was weakening, without searching hard enough for an alternative. It is time once more to dust off the Flash Card of Figure 30, with the mantra: *Distrust a pawn move; examine carefully its balance sheet.* We'll put a star on that Flash Card, as we've done with others, to identify it as a Super Flash Card, one that has been encountered at least twice.

18. Be5 Qc8 19. Nd2 Kf7 20. Nf3



20... h6

20... h6? Yet another weakening pawn move! Undoubtedly, White enjoys a fine position with the initiative, but is not winning yet. As a matter of fact, he still has to recover the sacrificed pawn. I reasoned this way: White will play Ng5† followed by Bxf6 and Nxe6, penetrating into Black's camp and winning. I have to stop Ng5. Therefore, 20... h6.

There are several things wrong with this logic. Firstly, 20... Re8, although denuding Black's King, stops White from winning the e-pawn without the pawn move ...h6. Secondly, giving up the e-pawn is not the end of the world for Black. For example, 20... Qe8 (to make room for the development of the R/a8) 21. Ng5† Kg7 22. Bxf6† Bxf6 23. Nxe6† Bxe6 24. Qxe6 Qxe6 25. Rxe6 Rhe8 26. R1e1 Rxe6 27. Rxe6 Kf7 and Black is OK. Incidentally, although I developed this analysis after the game without a clock running, I feel it is not beyond my APROP to analyze over the board.

What to do about my first mis-

take in logic? Time to further dust off our by now well known Flash Card of Figure 30 with the mantra: *Distrust a pawn move; examine carefully its balance sheet.* This one is a Super Flash Card already. I may have to think about a second star, a bigger Flash Card, a different color Flash Card, or something. For now, we'll stick with the simple, unvarnished, Super Flash Card.

How about my second mistake in logic? I knew I was a pawn up, but only subconsciously. I felt that losing the e-pawn was curtains. A Flash Card is called for, **FC27**, with the mantra: *Consider returning extra material!* This idea, this motif, now that I think of it, has never been at the forefront of my conscious thinking. It probably goes along with some of the other faulty chess ideas I have, discussed earlier in the book, which I'm working to root out, such as overvaluing a Bishop vs a Knight, overvaluing a structural or material advantage vs a dynamic advantage, and attacking with the piece of least value.

21. Rac1 Ba3 22. Rc2 Re8 23. c4 Qd8 24. c5 Rc8 25. Bd6 Ne4

25... Ne4? White can now win quickly. 26. Bxe4 fxe4 27. Ne5† Kg7 28. Qe3 Bb4 29. Qf4 and Black cannot avert serious material loss. In the game, I played 26... dxe4 losing even more quickly to 27. Ne5† Kg7 (if 27... Kg8 28. Qe3 forks the dark-squared Bishop and the h-pawn, which is hopeless for Black) 28. Rd1 when I resigned. White was threatening 29. Nxd7

followed by 30. Bf8† and 31. Rxd7, but 28... Kg8 29. Qe3 again forking Bishop and h-pawn would win for White, and 28... Kh7 29. Qe3 Bb4 30. Bf8 and it's curtains for Black.

I should have played 25... b6, when the outcome of the game is not at all clear.

So what went wrong? Was my **APROP** good enough to project the analysis above? I would say just about. Although not easy, I should have examined 25... Ne4 and seen it lead to ruin, then look for another defense, and find the additional attack on the pinned piece (here P/c5).

But more important is a failure in resolve, which can happen in difficult positions. I reasoned this way: after all these moves with pressure on my P/e6, I can finally alleviate it with ...Ne4, and if White captures the Knight, he'll be staring at some strong pawns in the center. During my considerations for the 25th move, I did not look at any alternatives to the Knight move 25... Ne4, nor did I look seriously at the continuations following 26. Bxe4. A Flash Card is called for, with the mantra: *Don't be intimidated—there's usually a resource!* **FC28.**

26. Bxe4 dxe4 27. Ne5† Kg7 28. Rd1 and 1-0.

Game 12

Nasser Abbasi—Wetzell

June 1993

1. e4 e6 2. d4 d5 3. Nc3 Nf6 4.

Bg5 Be7 5. e5 Nfd7 6. h4 0-0 7. Nf3 c5 8. Bd3 f5 9. exf6 Bxf6 10. Ne5 Qe8 11. Bxf6 Nxf6

I played 11... Nxf6? too routinely. For one thing, White has the useful move 12. dxc5, which he played. 11... Rxf6 looks klutzy, but there are no demerits for klutzy. After that move, White cannot play 12. dxc5 and furthermore, Black is threatening to play 12... cxd4, which disrupts White's game. So, 11... Rxf6 12. Nb5 Qd8 13. c3 a6 14. Na3 (or 14. Nd6) Nc6 when Black is OK.

So what did I do wrong? The Knight at f6 is the *defending piece of choice, given a typical position*. But I played the move somewhat automatically, perhaps apprehensive about White's chances for an attack on the King.

But this is precisely what chess is about. Anyone can learn a few buzzwords, memorize a couple of ideas such as Knights before Bishops, a Knight belongs at f3 (or f6), castle early, and so on. So I was guilty of playing by rote. So, a Flash Card with the mantra: *Rote: NG*. Inferred, of course, is: Don't play by rote, it's NG (not good). FC29. Also, see Fig. 63.

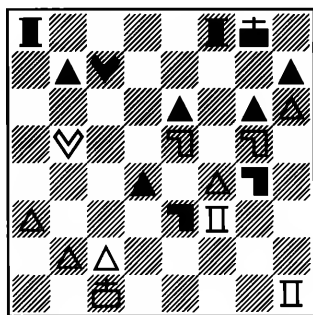
12. dxc5 Qe7 13. Qe2 Qxc5 14. 0-0-0 Nc6 15. f4 a6 16. g4 d4

16... d4? Reckless play. This move not only artificially isolates Black's own d-pawn, but also facilitates White's game, as should be clear after the moves 17. Ne4 Qe7 18. Ng5 (possibly stronger was 18. g5 Nd7 [18... Nxe4 19. Qxe4 when

White has a powerful game] 19. Qh5 when White is threatening mate in three: Qxh7†, Nf6†, and Ng6) with a strong game. Black, on his 16th turn, should have realized that White was threatening to win outright with g5- Qh5- Bxh7†, and should have played 16... Nb4 to get rid of White's dangerous Bishop. I was undoubtedly enraptured with the idea ...d4-Nd5-Ne3, which I eventually was able to play.

A Flash Card, FC30, is in order, with the mantra: *Neutralize opponent's threats first!* I could make up at least one more Flash Card, FC31 with the mantra: *Reckless only when loss is imminent!*

17. Ne4 Qe7 18. Ng5 Nb4 19. a3 Nbd5 20. Rdf1 Ne3 21. Rf2 Bd7 22. h5 Bb5 23. h6 g6 24. Bxb5 axb5 25. Qxb5 Nfxg4 26. Rf3 Qc7



26... Qc7? is a serious game losing blunder. I played a shallow mate threat, failing to take into account a key idea accessible with a very short *Analysis Horizon*. I failed to see that a very obvious defense for my opponent, namely 27. Qb3, would lead to immediate loss of ma-

terial for me. A little closer look might have revealed that Black had a similar threat with 26... Rac8, when White probably has nothing better than 27. Nxc4, easing Black's game.

So, what happened? I believe the nature of a mate threat is such as to give the *threatener* a false sense of security, since the opponent must defend against the threat. But the defense to the mate threat can sometimes be a threat, for which there is no answer. This is precisely what happened in this game. I removed a defender (my Queen) of an attacked man (the P/e6), realizing that I was making a greater threat. But it turns out that one defense against my mate threat threatens the P/e6 a second time, while it is now undefended.

A Flash Card, FC32, is in order, with the mantra: *Mate threats can be double edged!* This Flash Card will immediately conjure up this position—of course the diagram will help. Hopefully, I will not repeat this type of blunder.

27. Qb3 Qe7 28. Nxe6 Kh8 29. Nxf8 Rxf8 30. Nxc4 Qe4 31. Ne5 Rxf4 32. Rhh3 Qxe5 33. Qd3 Kg8 34. Kb1 Rg4 35. Rxe3 Rg1† 36. Ka2 dxe3 37. Rxe3 Qf6 38. Re8† Kf7 39. Qd7† and 1-0.

Game 13

Wetzell—Allan Bennett
June 1993

1. c4 Nf6 2. Nc3 e5 3. Nf3 Nc6 4. g3 d5 5. cxd5 Nxd5 6. Bg2 Nb6 7. 0-0 Be7 8. d3 0-0 9. a3

Be6 10. b4 a5 11. b5 Nd4 12. Rb1

12. Rb1? Allan, whose rating reflects the strong half of the USCF master class, and who's been studying very heavily over the last year or so, played his eleventh move very quickly. I thought that he had some combination up his sleeve should I play 12. Nxe5. So, rather than spending a lot of time trying to figure out if I can play this move, I said mentally—OK, *I'll believe you* and and played a different move. In the postmortem, Allan and I looked at his responses to 12. Nxe5, should I have played that. It turns out Allan wasn't sure how to continue, although it looks like Black would be better after 12... Bf6 13. Bxb7 Bxe5 14. Bxa8 Bb3 15. Qd2 Qxa8, which Allan probably would have found during the game.

So what's wrong? I was clearly intimidated by Allan's higher rating, as well as the fact that I felt he was recently playing better than his rating. I didn't look at 12. Nxe5 for more than ten or fifteen seconds before abandoning it. The right thing to do, of course, is to spend some time analyzing the move 12. Nxe5.

A Flash Card, FC33, is in order, with the mantra: *You're as good as he is!* This infers: I'm as good as he (or she) is, so don't be intimidated. The Flash Card doesn't have to spell everything out in excruciating detail—it only needs to call one's attention to a theme. This Flash Card is similar to FC28, so we could have

alternately just strengthened that one, by using a star on it, and not created this new Flash Card. Either way is OK.

12... f6 13. e3 Nxf3 14. Bxf3 Rb8
15. Qc2 f5 16. Bg2 Bd6 17. f4 Qe7
18. fxe5 Bxe5 19. Na4

19. Na4? loses the Exchange. As in the game, 19... Nxa4 20. Qxa4 Ba2 attacks my Queen Rook, and there is no escaping Black's raking Bishops. The attack on my Rook follows only three ply beyond my 19th move. I should have been able to see it. My *Analysis Horizon* is far enough to be able to see it. So why didn't I? The key reason, I believe, stems from a chronic problem I have of not paying attention to the *potential field of control* of the pieces—both mine and my opponent's. I didn't project the control of a1 and b2 by Black's dark squared Bishop in my general thinking, leaving me with a false sense of security for my Rook as I considered Na4.

A Flash Card, FC34, is called for, with the mantra: *Project control beyond the obstacles*. The obstacles are the pawns and pieces which interrupt the full board control of the Queen, Rook, or Bishop under consideration.

19... Nxa4 20. Qxa4 Ba2 21. Rb2

21. Rb2? On top of losing the Exchange, this loses a couple of pawns. Often the anger of making one blunder, like my 19th move, affects the way we think, making another blunder more likely. Allen almost certainly could have won with the Exchange up only, but at

least I would have had the two Bishops. Now, after 21... Bxb2, 22... Qxe3† and 23... Qxd3, I would have been hopelessly behind in material, so I resigned. But what else contributed to my bad 21st move? I think two things. Firstly, I didn't want to lose a whole Rook, so moving it where it will be protected comes to mind. But I could have *descreened* the Rook, by playing 21. Bd2. Of course, I also could have played 21. Qc2. Secondly, apparently I missed that Grand Theme on *discovered mobility*, namely that Black's dark squared Bishop screens, momentarily, the move ...Qxe3†. We'll generate a new Flash Card, FC35, with the mantra: *To protect, descreen!* Missing the *discovered mobility* is unfortunate, but I do have Flash Cards on it. Maybe I should consider a second star for even greater emphasis.

21... Bxb2 22. 0–1.

Game 14

Wetzell—George Mirijanian

June 1993

1. c4 d6 2. Nc3 e5 3. g3 Nf6 4. Bg2 Be7 5. Nf3 0–0 6. 0–0 Nc6 7. d4 exd4 8. Nxd4 Bd7 9. Rb1 h6 10. b4 Qc8 11. Re1

11. Re1? I gave the move a question mark because I was unaware that the c-pawn was so vulnerable. There was a way to defend this pawn against 11... Ne5, but not because of any foresight on my part. Had my Queen for some reason stood on d2, I wouldn't have been able to save the c-pawn. In that case, the likelihood of my perceiv-

ing the danger to my pawn would have been no greater. I've noticed that a P/c4 when White employs the English, or the P/f7 when Black is playing the French and has castled Q side, may ripen quickly as its owner can't defend it against an attack from a Knight. So my tenth and eleventh moves really were Should-a-Beens.

A Flash Card, FC36, is called for, with the mantra: *Beware vulnerable pawns: c4 in English, f7 in French.*

11... Ne5 12. Qb3 Be6 13. Nd5 Bxd5 14. cxd5 Re8 15. Be3

15.Be3? is a move that is not part of a middle game plan, be that plan good or bad. Better a bad plan, than no plan at all. About the only good thing I could say about this Bishop move is that it gets the Bishop off the back rank. If attacked by one of Black's Knights, it would have to move or probably be recaptured by a pawn, damaging White's pawn structure. A plan I would have had time to cook up over the board might be e4-f3-Be3-a4-Nb5 with play on the Queen side.

We'll generate a Flash Card, FC37, with the mantra: *A move should be part of a plan!* Now this Flash Card is very similar in its message as FC7, but that's OK.

15... Bd8 16. Rbc1 Qd7 17. Rc2 Re7 18. a4 Neg4 19. Bf4 Ne5 20. h3 Ng6 21. Be3 Ne4 22. Qd3 Nf6 23. Ra1 Ne5 24. Qb3 Ng6 25. Qd3 Re5 26. Nb5 a6 27. Nc3 Re8 28. Ne4

28. Ne4? Allowing Black to damage my pawn structure. I saw that

after 28... Nxe4 29. Bxe4 Black could attack my Queen with ...Ne5, but felt I could move the Queen while maintaining protection of my Bishop at e4. I didn't realize until after Black played 29... Ne5 that I couldn't maintain the protection of my B/e4 with 30. Qd4 because I would lose the Exchange after 30... Bf6 31. Qd1 Ng4.

So, what went wrong? At least two things. I was too cavalier about allowing myself to get into a situation where I had a *chaseable protector*, which, incidentally, I knew could be risky. Also, there was a failure in **APROP** in that I didn't see that Black could move his Bishop to the vacated square 30... Bf6 (while I was contemplating 28. Ne4).

Two Flash Cards are in order. One, FC38, will have the mantra: *Beware the chaseable guardian!* The other, FC39, will have as mantra: *Squares are parking places!* I have a tendency to think of a square as married to the piece that's on it. As a parking place, the square will accommodate first one traveler, then another. Hopefully, repeatedly reviewing this Flash Card will break me of the bad habit of closing off a square to all other pieces during the contemplation of a move, even if that square is vacated in the middle of the combination.

28... Nxe4 29. Bxe4 Ne5 30. Bf5 Nxd3 31. Bxd7 Re7 32. Bg4

32. Bg4? I chose this move, knowing Black could win a pawn,

rather than subject myself to doubled, isolated pawns with 32. exd3. This, however, is an incorrect assessment of the resulting position. Flash Card FC40 has the mantra: *pawn minus is usually worse than doubled pawns*, which Allan Bennett pointed out to me after the game. With 32. exd3, White would obtain some compensation for the doubled pawns through the semiopen c-file.

32... Nxb4 33. Rd2 Re5 34. Bf3 Bg5 35. Bxg5 Rxg5 36. a5 c5 37. dxc6 Nxc6 38. Bxc6 bxc6 39. Rxd6 Rc5 40. Rb1 Rxa5 41. Rxc6 Ra2 42. Rc7 Rxe2 43. Rbb7 Rf8 44. Ra7 Re6 45. Rc4 Rd8 46. Rf4 f6 47. Rg4 g5 48. Rc4 Rd1† 49. Kg2 Rde1 50. Rcc7 h5 51. Rg7† Kf8 52. Rh7 Re7 53. Ra8† Re8 54. Rxa6 R1e6 55. R6a7 R6e7 56. Raxe7 Rxe7 57. Rxx5 Kg7 58. h4 Kg6 59. Rh8 gxx4 60. gxx4 Rg7 61. Kf3 Re7 62. Kf4 Re5 63. Rg8† Kf7 64. Rg4 Rh5 65. Kg3 Rh8 66. Rc4 Kg6 67. Rc5 Rb8 68. h5† Kf7 69. Kg4 Rg8† 70. Kf4 Rg2 71. Rc7† Kg8 72. f3 Rg5 73. Rc6 Rxx5 74. Rxx6 Rb5 75. Rf5 Rb7 76. Kg5 Kg7 77. Rc5 Ra7 78. f4 Kf7 79. f5 Rd7 80. Rc6 Rb7 81. Rh6 Rb1 82. Rh7† Kg8 83. Ra7 Rb6 84. f6 Rb1 ½-½.

If my knowledge of endgames were better, I would have known earlier that I couldn't win and would have offered a drawn earlier.

Game 15

Wetzell—William Aulson

October 1993

1. c4 Nf6 2. Nc3 d5 3. cxd5

Nxd5 4. g3 e5 5. Bg2 Be6 6. Nf3 f6 7. 0-0 Bc5 8. e3

8.e3? Missing a chance to win a pawn. During the game, I analyzed the position after 8. Qb3, but didn't see how I could win a pawn. But after 8. Qb3, if 8... Bb6, 9. Nxe5 wins a pawn. If 8... Nf4, then 9. Qb5† wins material. The disappointment is that the analysis over the board just isn't that hard, particularly if the correct candidate move is already being considered. A Flash Card, FC41 is in order. The mantra: *Do drills to improve APROPI!*

8... 0-0 9. d4 exd4 10. Nxd4 Bxd4 11. Qxd4 c6 12. Rd1 Na6 13. Nxd5 cxd5 14. Bxd5 Qxd5 15. Qxd5 Bxd5 16. Rxd5 Rac8 17. Bd2 Rc2 18. Bc3 Rc8 19. R1d1 Rc7 20. a3 Nc5 21. R1d4 h6 22. Kg2 b6 23. Kf3 Re7 24. Rd6 Ne6 25. Rd2 Rxd2 26. Rxd2 Ng5† 27. Ke2 Kh7 28. f3 Kg6 29. e4 Nf7 30. Bb4 Re6 31. Kf2 f5 32. exf5† Kxf5 33. Rd7 Ne5 34. Rd5 Kg6 35. Bc3 Nc6 36. Rd7 Ne7 37. Rxa7 h5 38. Rd7 Kh6 39. h3 g5 40. f4 gxf4 41. gxf4 Nf5 42. Be5 Kg6 43. Rc7 Ne7 44. Kf3 Kf5 45. Rd7 Nc6 46. Rd5

46. Rd5? Missing the strong enveloping maneuver 46. Rf7† Kg6 47. Rg7† Kh6 (47... Kf5 48. Rg5 mate) 48. Rg5, when Black's King has been shut out and White is threatening to advance his King.

In thinking about this after the game, I believe that three factors contributed to my move selection. First of all, I was fascinated with *discovered mobility*. After 46. Rd5,

I could discover check with the Bishop. But the threat is vague and somewhat simpleminded. Secondly, I didn't recognize the concept of envelopment in this position. I am probably abusing the term envelopment for this maneuver, so let's coin a different term—forced King march. In the third place, I never considered a second candidate, another choice for my 46th move.

A new Flash Card, **FC42**, is in order, with the mantra: *Forced King march is strong maneuver.* To remedy my not looking for a second candidate, we'll place a star on **FC20**, with the same message.

46... Kg6 47. Rd6 Rxd6 48. Bxd6 Kf5 49. Be5 b5 50. b3 b4 51. axb4 Nxb4 52. Bd6 Nc6 53. Ke3

53. Ke3? Walking into a potential fork, thus losing a pawn. Here, I fell prey to some simplistic reasoning. My P/b3 was safe, I thought, since, if attacked, could always be advanced to a dark square covered by my Bishop. However, after **53... Na5**, I had to give up the pawn or lose my Bishop to a fork.

FC1 shows a strikingly similar theme as that used to exploit this position. In **FC1**, we had a free Knight move (the check) followed by a fork. After **53. Ke3** in this game, we had a free Knight move (attacking the pawn which must move to escape capture), followed, if the pawn is not given up, by a fork. Both scenarios lead to a *fork in two*. In both cases we can think of the first Knight move as a decoy

move. Normally, a *fork in two* can be parried because one attacked piece can be moved on the move, and the other on the following move if the maneuver is carried out. Let's rethink that Flash Card, **FC1**, with the objective of combining these two similar but not identical themes, and somehow increase the impact of this Card. We'll place a star on the new one, and then discard **FC1**.

The common thread between both situations above is that there existed two pieces ultimately forkable. It's easy to visualize the arrangement of two pieces ultimately forkable, since it's the same arrangement as two pieces about to be forked.

FC43, with a star, to replace **FC1**, will have a mantra: *Beware the ultimately Knight forkable!*

53... Na5 54. Bc5 Nxb3 55. Bb4 Ke6 56. Ke4 Nc1 57. f5† Kf7 58. Bc5 Nb3 59. Be3 Na5 60. Kf4 Nc4 61. Bd4 Nd2 62. Be5 Nc4 63. Bc3 Nd6 64. h4 Kg8 65. f6 Nf7 66. Kf5 Kh7 67. Bb2 Kh6 68. Ba3 Kh7 69. Ke6

69. Ke6? allows ...Kg6, drawing. I could have played **69. Bb4 Kh6 70. Bd2† Kh7 71. Bc1** and now, if **71... Nd6†** White wins with **72. Ke6**, while on other Black moves White will be able to win with either **72. Kg5** or **Kg6**.

Now, what went wrong? For one thing, I simply didn't know the severe limitation of a single Bishop in these kinds of endings. Like every-

one else, I was aware that the Bishop covered only its own color, but didn't realize that my opponent's King, once at g6, a square of different color from the Bishop, could not be forcibly dislodged. Zugzwang is not available in this position because the Knight will always have moves. Also, contributing to my not grasping this over the board—I do believe I have enough ability to deduce this g6 principle over the board—was a preoccupation with the “I move here, he moves there, then I move there” sort of logic, which tends to sidetrack the more global thinking required to see this “other color principle.”

So—Flash Card **FC44** with the mantra: *In Bishop vs Knight ending, other color is really weak!* Although all the words aren't there—The Flash Card would become too cumbersome—the implied message is: Control over the other color from the Bishop is very weak.

69... Kg6 70. Be7 Nh8 71. Bf8 Nf7 72. Bg7 Nd8† ½–½.

Game 16

Wetzell—Rigel Cappallo

November 1993

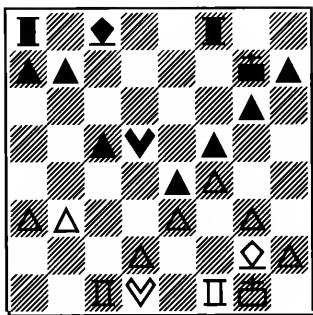
1. c4 g6 2. g3 Bg7 3. Bg2 c5 4. e3 Nc6 5. Nc3 d6 6. Ng2 e5 7. 0–0 Nge7 8. b3 0–0 9. Bb2 f5 10. Nd5 Nxd5 11. Bxd5† Kh8 12. f4 Nb4 13. Bg2 e4 14. Bxg7† Kxg7 15. a3

15. a3? I was worried that the N/b4 was going to become the next nail in the knee. This could happen

if I dawdled and let Black strengthen his bind on d3 after the Knight lands there, with moves like ...d5. Time is of the essence! I did think through that after 15. a3 Nd3 16. Nc1 Black would have to exchange Knights, or get an inferior position by opening up the h1–a8 diagonal for my Bishop, as well as ripening his forward d-pawn. I did look at 15. Nc1 briefly, but abandoned it after some *Oh my God, look what he can do to me then* simplistic analyzing. I saw 15... Qf6 threatening my R/a1, which was protecting my a-pawn. OK—that's it—I was convinced—too dangerous. But just an additional few seconds analysis would have revealed that, in this line 15. Nc1 Qf6 16. Rb1, everything is covered, with White having the useful moves 17. a3 and 18. d3 on tap.

So I was satisfied with 15. a3, neutralizing the scary black Knight, and thought no further. I've spelled out my problem pretty clearly here. How about a Flash Card? **FC45**. The mantra—Never think: *Oh my God, look what he can do to me then!* Incidentally, we can often find a better analysis by spending a lot of time after the game. But here I was clearly uncomfortable pursuing the 15. Nc1 line, and I didn't stop because I had insufficient time.

15... Nd3 16. Nc1 Nxc1 17. Rxc1 d5 18. cxd5 Qxd5



19. Qc2

19. Qc2? I considered 19. d3 Qxd3 20. Qxd3 exd3 21. Rfd1, exchanging my backward d-pawn for Black's e-pawn, but then got worried about moves like ...Rd8, ...Be6, ...Rac8, ...Bxb3 attacking the Rook on the d-file, and Black getting two connected passed pawns, winning easily. It turns out, of course, that in this line, after 21... Rfd8, a few seconds of further thought would show me that White has 22. Rxc5 with an excellent game. So basically the same thing happened to me here as in my previous note. I abandoned a good idea, and kept my backward d-pawn. The same admonition prevails as that of the previous Flash Card. I will put a star on that Card, to elevate it in importance.

19... Be6 20. Qc3† Kg8 21. b4 Rad8 22. Rfd1 Bd7 23. Bf1 Be6 24. bxc5 Qb3 25. Bc4

25. Bc4? Here I was guilty for the third time in a row of curtailing my thinking. I was a pawn up, so why not head for the endgame? The simple 25. Qxb3 would be terrible since the R/d1 would have to move after Black recaptures with the

Bishop, allowing Black to recapture his pawn with a Rook on the seventh to boot. So why not 25. Bc4 exchanging Queens and Bishops? But 25. d4 would have been much better, since 25... exd3 (White would be golden with the extra pawn, and a protected passed pawn at d4, if Black doesn't capture en passant) 26. Rxd3 doesn't allow Black to pile up as easily on White's backward e-pawn as he did in the game on the d-pawn.

Time for a Flash Card, **FC46**. The mantra: *Improve your position first!* The implied idea is that I should, before contemplating any major operation, such as heading into the endgame, or sacrificing material, determine if I have time to improve my position first. Many times, of course, there is no time. But here, again, I played too quickly in a situation where I had time to improve my position without getting into time pressure.

25... Bxc4 26. Qxc4† Qxc4 27. Rxc4 Rd3 28. Ra4 a6 29. Kf1 Rc8 30. Rb4 Rxc5 31. Rxb7 Rxa3 32. R1b1 Ra2 33. Ra7 Rc8 34. Ke1 Rd8 ½-½.

When I first reached the master rating, it was similar to a runner having a hot day and making a personal record which will take a while to digest or consolidate, before the next better record can be set. I crossed the line, got the master "sheepskin" from the USCF, but knew I wasn't a solid master yet, able to play steadily at master

strength.

Since that first debut as master, using the study techniques I develop in this book within a meager regimen of about three hours a week, along with one weekly serious forty moves per hour game, I have been unable to maintain (for any extended number of games) a playing strength at master level. But my very recent development of Appendix V—and here I urge you to read the introduction to that appendix—has given me great confidence about my intermediate term goal (next several years) of achieving a solid, steady playing strength at master level with a seven hour a week study program.

APPENDIX VI

FROM THE EDITOR'S FILE

I liked what I read in Mr. Wetzell's book. As the publisher at Thinkers' Press it is important for me to understand what is in a manuscript; it makes marketing a lot easier! I decided to apply it to some recent games. He's correct, it is much more valuable applying these techniques to games I've lost.

The losses have been exasperating but instructive. I let my guard down at "crucial moments" like I've done before.

I hope to give you some insight about one of my games, using the Rolf Wetzell method, and title my own flash cards. As I accumulate these cards, I will review them, as suggested. One master I know reviews mating patterns and other odds and ends before each significant tournament he plays in, from a notebook. Using the cards would make it a lot easier.

Game 17

Bill Sandbothe—Long

March 1994

French Exchange

- | | |
|--------|-----|
| 1. e4 | e6 |
| 2. d4 | d5 |
| 3. ed | ed |
| 4. Bd3 | Bd6 |

Sure, the innocuous Exchange Variation. In spite of what the older books say, this doesn't have to be a drawish variation.

5. c3

In a previous game my opponent played 5. Nf3 and we went 5... Bg4 6. c3 Nge7 7. Bg5 f6. This "...f6" idea will haunt me in a few moves.

- | | |
|--------|-----|
| 5. ... | Nc6 |
| 6. Nf3 | Bg4 |

Often we hear of the "problem Bishop" in the French. Not in the Exchange.

- | | |
|--------|------|
| 7. 0-0 | Nge7 |
| 8. Re1 | |

Kochiev—Psakhis, Tallinn 1987

went 8. Re1.

- | | |
|---------|-------|
| 8. ... | Qd7 |
| 9. Nbd2 | 0-0-0 |

Psakhis has played 9... 0-0 though he looks at 9... 0-0-0 as "risky but interesting"—my type of chess (and, my type of undoing too).

10. Qa4!?

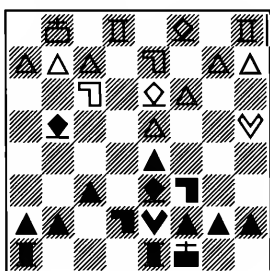
Holmov—Psakhis, Kiev 1984 went 10. b4 Rde8 11. b5 Nd8 12. Qa4 Kb8 13. Ba3 f6. I am not so much trying to "annotate" this game for you as to show you how "similar" moves can be played and yet the game, as a whole, gets out of hand because of those very similar moves—FC material.

10. ... f6?!

It's very soon already, but probably a place for my first FC. 10... f6 wastes a move. 10... Kb8 is probably better. I am going to try to hold the Q-side even though 10. Qa4 caught me off guard. I expected my opponent to play something like 10.

b4 because launching a pawn assault seems a lot less risky than bringing a Queen out like this.

I played 10... f6 because I didn't want the N/f3 to land on g5 or e5. Unfortunately it makes e6 weak. How about, *"Rethink the past, no automatic moves."*



11. b4 a6

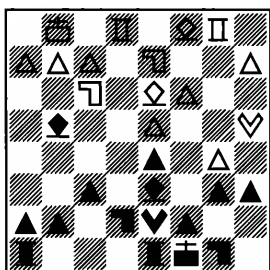
A different opponent and 12. Bxa6 might be in the cards, but not Bill. I don't see anything else.

12. b5

Here my opponent could have used a Flash Card! He thought he was winning at this point. His card? *"It ain't over till it's over."*

12. ... Nb8

13. Rb1 b6?!



Whew. 13... Bf5! is even stronger. *"Liquidate elements of the impending attack"* might have been my next Flash Card. 14. Bxf5 Nxf5

15. Qb3 axb5 16. Qxb5 Qxb5 17. Rxb5 c6 gives Black more maneuvering room.

The reason I didn't see 13... Bf5! is because I had invested in the move ...Bg4 and this involves moving the piece again, in the reverse direction! The FC might instead say, *"Put it in reverse to slow the attack."*

14. Ba3 a5

15. Bxd6 Qxd6

16. Qc2

I don't think White is serious about winning the h7 pawn so I never gave it any thought, but I should have at least rolled it over in my head for a few seconds instead of "assuming."

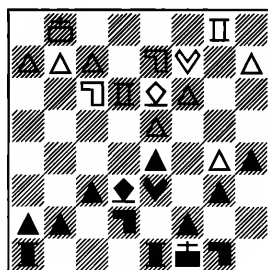
Chess isn't easy. My notes show three pages of analysis about the next move.

16. ... Be6

Because I see the move c3-c4 coming. 16... g6 with the idea of 17... Bf5 is probably better(!?!).

17. Re3

I need a FC fix here! Right after I played 16... Be6 I saw the idea of the Rook doubling. I need some of Rolf's ideas about handling time. This was a 40/80 event and I was starting to feel the pressure of the clock.

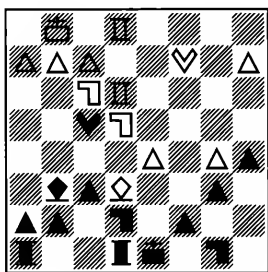


I thought I could protect the pawn on d5 with an eventual ...Bf7 but instead all I do is lose tempi. The N/e7 has become a big liability. I can't play ...Rd7 because it seems White can generate too much heat on the h3-c8 diagonal. My thinking has become fuzzy, too many possibilities. Even "*Read Kotov*" is an incomplete, non-specific idea for a card. "*Always watch for doubling danger*" might be more to the point since there is so much in Alexander Kotov's *Think Like a Grandmaster*.

17. ...	Rde8
18. Rbe1	Bf7
19. c4	dx c4
20. Bxc4	Bg6!
21. Ne4	Qf4?!

White has voluntarily blocked the e-file and I make a move that contributes nothing towards that idea. Of course I was concerned about the giant cholesterol blockage which is showing up in the "square" e6-c6-c8-e8. It turns out that 21... Qd7! is probably much more effective.

22. Be6†	Kd8
23. d5	



Knowing I need a Flash Card is clear; naming it isn't always. It's

amazing how chess blindness can set in because of a complicated position. I didn't play 23... Nf5 because I was afraid of 24. Rc3. But, *the move of the week* is 24... Nd6. In my head I saw 25. Rxc7 with the threat of Rc8. I forgot that the N/d6 stops the Rook from going very far. And at the same time, Black is threatening 25... Bxe4. I just missed it. Perhaps a Flash Card can't save me from this type of blindness, but it may permit me to see this kind of defense in another situation—if I can remember it. That's where the FCs come in handy, use the subconscious. Thus, "*Retreat, block, and attack!*"

23. ...	Bxe4
24. Rxe4	Qd6
25. Qe2	Nd7
26. Bf7	Nc5
27. Re3	Rhf8
28. Bxe8	Kxe8?
29. Rxe7†	1—0

It's not my intention to monopolize Rolf's book, but I did want to show you how it works for me. Rolf went along with including a game too. Now let's see if I can use these ideas to pump up my playing performances. Good luck to you to Dear Reader.

Bob Long
Senior Editor

PS: Does the method work? *I believe it does.* I looked at this game very critically. Two months later my Expert opponent repeated and I played 10... Kb8. After 11. Bb5 a6 12. Bd3 h6 he played 13. b4, launching a Q-side attack which died after 13... Nxd4! Systems can work!

APPENDIX VII

GLOSSARY

Analysis Horizon: Averaged for all the moves in a time control, the Analysis Horizon is the look-ahead in half moves (ply). It varies from individual to individual, but is always further for slower time controls. The accuracy of the look-ahead does not change the Analysis Horizon.

APROP: Ability to PROject Positions: Total speed and accuracy of calculation. This includes how well one visualizes a position several ply into the future, without moving the pieces. High quality APROP, coupled with a shorter Analysis Horizon, is superior to a further Analysis Horizon coupled with a faulty APROP.

CCC: Component of Chess Capability.

Check: Symbol used in the text is †. A move that attacks the enemy King.

(The) Exchange: Winning a Rook for a minor piece (Bishop or Knight).

Images: Motifs or ideas subject to rapid mental recall. There are light *Images*, which are quickly forgotten, durable *Images*, which have been repeatedly reinforced, and quality *Images*, which are logically connected to other knowledge; durable and quality *Images* are easier to remember.

Informant: Soft-bound book published three times a year, featuring, among other special items, the most important 650 or so games for that period.

Mental Clock Rate: The maximum speed at which you

can assimilate information, such as counting a series of clicks.

MM: Move selection Method.

ply: a half-move. A move by White followed by a move by Black would be two ply. From the Latin *plicare*, to fold.

Quint: a set of five moves (10 ply), used as a tool for time management.

Rating: A ranking method used by the US Chess Federation (and the FIDE, the World Chess Federation). If one player is rated higher than his opponent by 10, 20, 50, 100, 200, 400, 600, or 800 rating points, his winning expectancy should be .514, .529, .571, .640, .760, .909, .969, or .990, respectively.

Sac(k) or Sacrifice (or real sacrifice): Giving up material, or taking a positional disadvantage, voluntarily, without actually being able to calculate far enough in advance to determine if the material (or positional disadvantage) can be recovered.

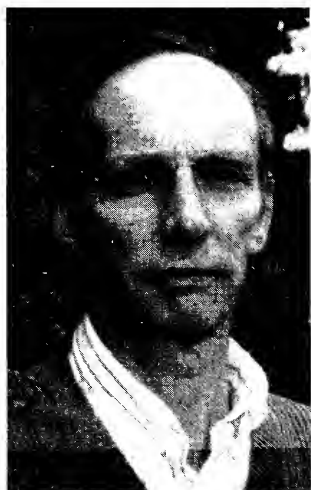
Sham Sac or Sham Sacrifice: Surrendering material, or yielding a positional advantage, in such a way that the player can calculate far enough ahead to know that he can recover his material or positional disadvantage.

Solitaire: A method of chess study where the “student” selects an actual game, usually between grandmasters, chooses a partner from the two players, and attempts to determine, or second-guess, what his partner played. The game score is covered so that all the moves are visible up to the one being “guessed.” The player “guesses,” then uncovers that move and makes the actual move played by his partner in the game. He then also plays the opponent’s move, and covers his partner’s subsequent move, and repeats the process.

Strength: Chess strength.

†: Symbol used in text for “check.”

THE AUTHOR



Rolf Wetzell was born in China to German parents and immigrated to the U.S. in his early teens. With degrees in electrical engineering from the Massachusetts Institute of Technology and Northeastern University, he worked in the defense industry for thirty six years. Married, with tax-paying daughter and son, he's starting an investment advisory business while enjoying some golf, sailing, occasional community service, and, of course, chess.

COLOPHON

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3. The English Opening: Neo-Keres 3... c6. 1 c4 e5 2 g3 Nf6 3 Bg2.

4. The Closed Two Knights' Defense 4 d3. 1 e4 e5 2 Nf3 Nc6 3 Bc4 Nf6.

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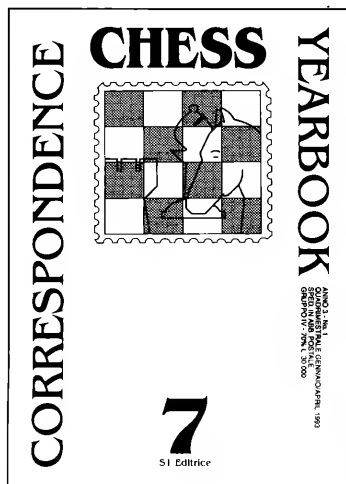
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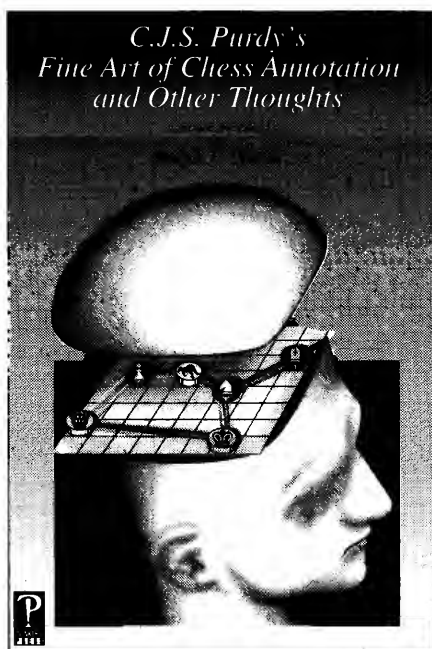
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How to Become a Chess Master

Chess strength depends a great deal on how much you know. But, what you know is really everything you've learned, minus all you've forgotten—and the forgetting process is powerful.

Are you spending all your "chess energy" learning new things instead of setting aside a portion of that time and energy insuring that you're not losing, not forgetting the good stuff you already know at the slowest possible rate?

Studying specific models and improving one's games systematically are the most efficient way, Wetzell believes, to get the most improvement for any given level of effort.

And, are you among those who have a time pressure problem? If so, this book will also methodically teach you a sure-fire system for overcoming that ailment too.

Reaching a plateau of chess strength after many years of playing, Rolf Wetzell devised new and unusual methods of study. These methods propelled him through several USCF rating classes to achieve his life-long ambition of becoming a chess master—an unusual achievement beyond the age of 50. He studied smarter, not harder.



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